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Navigating Uncertainty and Growing Jobs: Considering Small Employer Firm Resilience During Challenging Economic Times

Research Report Prepared for Interise

Colleen Kamen
Christopher Behrer

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Federal Reserve Bank of San Francisco
101 Market Street
San Francisco, California 94105
www.frbsf.org/cdinvestments

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Abstract

How have certain small employer firms demonstrated resiliency despite ongoing economic uncertainty? This study considers the organizational capabilities of small employer firms operating in low- and moderate-income (LMI) census tract areas. Based on the limited evidence gathered in this mixed-methods study, the authors propose that resiliency, defined in this study as a company's ability to act effectively in response to uncertain economic conditions such that the firm maintains or expands its workforce, depends strongly on five organizational capabilities. These are: (1) the effective use of measurable indicators, (2) the ability to correctly assess firm strengths and demonstrate market awareness, (3) the ability to plan and implement effectively, (4) creativity under pressure, and (5) adaptability, referring to the capacity to dynamically revise the firm's strategic positioning in response to market shifts. Resilience is dynamic, shifting as the context changes. And it isn't necessarily easy to attain–or maintain–even for small employer firms that fared well in up markets. Likewise, these capabilities are deeply interrelated; it would be difficult, if not impossible, to be effective at any of these practices without some mastery of the others. These capabilities are not a universal recipe for small employer firm success and job growth, although these preliminary findings might have important implications for efforts to better support the small firms that are central to job creation. Furthermore, this practitioner-based research builds on evidence within Interise that suggests that these types of leadership skills and organizational capabilities are both teachable and learnable. As such, this abstract lays the critical groundwork for business training programs interested in developing the capacities that entrepreneurs need to thrive during periods of economic volatility.

Section I. Introduction

Small firms play a significant role in economic development in the United States.[1] These firms employ about half of all private sector employees, and from 1993-2009, small businesses accounted for nearly 65 percent of net new jobs (SBA FAQ, 2011). Not surprisingly, the recent national recession demonstrably impacted small businesses. Small employer firms accounted for almost 60 percent of the job losses in the first quarter of 2009, and for 40 percent of overall employment decline (SBA, 2010, 2; Sahin et al., 2011: 1). For example, the U.S. economy lost six million non-farm payroll jobs between August 2008 and June 2009 alone (SBA, 2010: 17). Among companies with fewer than 50 employees, jobs declined 10.4 percent, compared to 7.5 percent decline among businesses with more than fifty employees (Sahin et al., 2011: 1). This trend was distinct from the 2001 recession, when employment decline among small businesses was just 10 percent (Sahin et al., 2011: 1).

Yet, certain small employer firms thrived, maintaining or expanding their workforce despite the stormy economic climate. What gave these firms a leg up, capable of recovering from the numerous challenges they faced? What skills can they teach firms that have struggled? The nature of what separates those companies that maintained or expanded their workforce from those that experienced job losses during this period warrants closer examination. Small businesses faced weak consumer demand for products and services, which adversely impacted revenues and new investment spending. Credit also proved to be a challenge in this period (Sahin et al., 2011, 1). Tightened lending standards and decline in volume of credit made it significantly more difficult for small firms to access financing through agencies and private lenders (SBA, 2010: 3-4). The number of loans from depository institutions dropped by 15 percent in 2009, according to the SBA (2010: 4).

Small firms might also be less prepared to deal with unpredictable economic climates. This study builds on existing research that suggests that small businesses are particularly vulnerable to harsh business climates and unsettled markets. Beyond financing and credit challenges (Porter, 1995), the limited resources of most small firms and their relative inability to survive poor managerial decisions leave them particularly vulnerable to failure in adverse conditions (Covin and Slevin, 1989). In fact, the uncertainty brought on by weak consumer demand and weak sales appears to have played a demonstrable role in the poor performance among small firms during the recent recession (Sahin et al., 2011). These findings have important implications because even though the recession has ended, and the likelihood of a subsequent recession in the near future might be relatively slight, small businesses have continued to face significant economic uncertainty. Moreover, recession-related stress likely resembles the type of challenges that companies routinely encounter on a smaller scale (Christianson et al., 2009: 840). As such, understanding the relationship between firm resiliency and economic uncertainty is important to better understanding the organizational-level interpreting, relating, and re-structuring that occurs in response to disruptive events. Such an examination can help lay the groundwork to better support small business resiliency during periods of economic uncertainty.

The primary goal of this practitioner study is to better understand the relationship between firm resiliency and economic uncertainty. Resiliency studies often focus on the factors enabling a company to endure challenges and emerge stronger (Christianson et al., 2009; Weick, 2007; Bégin and Chabaud, 2010). Likewise, this study defines organizational resiliency as the capacity for what Hamel and Välikangas refer to as "continuous reconstruction" (2003), doing whatever is necessary to recover and maintain the survival of a business, even if that means mobilizing different capabilities, imagining a new strategy, or completely reinventing the business itself "in response to conditions that are uncertain, surprising, and sufficiently disruptive that they have the potential to jeopardize long-term survival" (Lengnick-Hall and Beck, 2009: 41). This study primarily considers one outcome-oriented measure of resiliency–the ability to maintain or expand the workforce during periods of economic uncertainty, coupled with an examination of the relationship between economic uncertainty and strategic leadership. As such, this study considers whether more resilient firms demonstrate leadership skills and capabilities that are distinct from less resilient ones. Additional factors that contribute to resiliency, namely organizational structure and function as well as eternal environment are out of scope of this analysis.

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1 Small firms are commonly defined as having fewer than 500 full time employees (FTEs), excluding sole proprietorships.

This study analyzed the longitudinal survey data of 374 small employer firms that participated in the Interise small business management program from 2008 to 2010[2] as well as case study interviews with 16 of these companies. These companies are predominately located in low- and moderate-income (LMI) census tract areas and annual sales generally range between $300,000 and $18 million. They are located in different sectors around the country and have navigated the recession with varying degrees of success. Because it is not possible to establish causality with the data available in this research, interpretations of these results were deeply informed by existing research on organizational resiliency.

Firm success is not a constant, as this study underscores. Rather, as Hamel and Välikangas put it, "[R]ather than go from success to success, most companies go from success to failure and then, after a long, hard climb, back to success" (2003: 55). This study considers how certain small employer firms were able to positively respond to dramatically changed economic circumstances and regain (or maintain) success. As such, this study proposes five capabilities critical for small employer firm resiliency during challenging economic periods, and examines each one in turn. These capabilities are: (1) the effective use of measurable indicators,[3] (2) the ability to correctly assess strengths and demonstrate market awareness, using this knowledge to reduce costs and offset decreasing margins and increasing competition (Gibson and Tarrant, 2010, 4), (3) the ability to plan effectively,[4] (4) creativity under pressure (Ibid), and (5) adaptability, namely the capacity to dynamically revise aspects of the firm's strategic positioning in response to market shifts (Reeves and Deimler, 2011; Hamel and Välikangas, 2003).

This study should be seen as an initial step in considering small employer firm resiliency and is primarily intended for practitioners and policy makers. As such, this study considers how this research might support meaningful dialogue between the business, practitioner, researcher, and policy communities. It also suggests that these capabilities might comprise a set of teachable skills that could be employed to better support small employer firms.

2 The curriculum teaches strategic management skills to small employer firms. Interise has taught the program in several cities throughout Massachusetts since 2005. In addition, the Small Business Administration's (SBA) Emerging Leaders (e200) Initiative has been using the Interise curriculum since 2008. Currently, the curriculum is offered in 35 cities and communities across the U.S.

3 This insight is based in large part on authors' conversations with Peter Russo.

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Section II. Measuring Resiliency: Methods, Initial Results, and Limitations

Research on resiliency has primarily been qualitative and descriptive (Stephenson, 2010: 37). This practitioner study employs a mixed method approach increasingly used in applied business research (Hurmerinta-Peltomaki and Nummela, 2006; Molina-Azorin, 2007), and arrives at conclusions primarily through case study research informed by existing literature (Eisenhardt, 1989) and survey analysis. Nesting the methods of research amplifies what would be possible through one method of analysis alone. Given the limited value of results of the quantitative analysis, which were based on imprecise measures such as "confidence" and measured by inexact Likert scales, these findings were primarily used to inform the selection of the firms examined in the qualitative analysis. The findings were also used as part of the process of analyzing the case study results, which make up the backbone of the study. The case study method allows researchers to develop rich and deep descriptions of organizations and the activities within those organizations (Yin, 2003), namely how small employers responded to economic uncertainty and the ways that this experience exposed weaknesses and lack of preparation and led to various organizing routines in response (Weick, 2007; Christianson et al., 2009). In turn, the quantitative analysis provides a large enough sample size to identify possible associations between resiliency and particular characteristics of strategy across surveyed firms and thus produce the preliminary theories that helped inform that case study analysis. Finally, this case study analysis is also deeply informed by existing literature on resiliency and organizational learning in response to crises and unexpected events that threaten a firm's future.

This study largely considers resiliency in terms of firm-level ability to maintain or grow a workforce. Job growth is commonly used as an economic indicator and a gauge of the health of labor markets as well as overall market conditions (SBA, 2010; Kane, 2010; Sahin et al., 2011). Job creation is less commonly tied to resilience, yet in this study it is used as the primary manner of capturing a small employer firm's ability to successfully adjust to changing or deteriorating economic conditions. Defining resiliency as job growth (and loss) does not take into account whether a firm had retained its workforce but reduced wages, hired contract employees, or diverted funds to staff that might have been better spent building resilience capacity. In addition, it does not account for resiliency expressed as a firm's willingness and ability to join or create joint ventures. Despite these challenges, job growth can be a reliable way of capturing a firm's performance relative to other firms, and of demonstrating that firm's impact on the local economy. Therefore, this study uses change in employment over time as a metric of resiliency, with the understanding that like all metrics, it is not perfect, but can still yield useful insights.

Literature Review

This section will briefly outline the most relevant threads in research on organizational resilience. The concept is used across a number of fields, including physics, ecology, psychology, and organizational learning and management. Definitions of resiliency vary, although most emphasize adaptive capacity and the ability to improvise (Coutu, 2002: 48; Gibson and Tarrant, 2010). A smaller number focus on taking deliberate steps to build contingency capacity and strengthening ties to both employees and customers (Zook and Rigby, 2001).

The majority of research on organizational resiliency focuses on disasters and crises, which trigger learning and organizational change because they expose weaknesses and reveal unrealized behavioral potential (Christianson, et al., 2009: 846). This research often examines high-reliability organizations–operations such as air traffic control centers, nuclear power plants, and even clinical environments–that constantly confront unexpected events but operate with remarkable consistency and effectiveness. These organizations are resilient, researchers argue, because they are preoccupied with failure and quickly apply a rich set of resources to a disturbance as well as address system conditions that contribute to a crisis (Stephenson, 2010: 34-35). As such, these researchers primarily view resilience as the capacity of a system to 'bounce back', absorbing change and returning to its previous state. This is a common frame in engineering, for example, which frames resilience as the speed of return to equilibrium (Stephenson, 2010: 36 quoting Holling, 1996).

Similarly, some research considers resiliency in terms of organizational learning and capacity, referring to the ability to anticipate challenges and effectively respond to them. Some studies examine how disasters and unexpected events can provoke learning. These highlight the mechanisms at work in resilient organizations and on the processes of adaptation and regeneration that enable organizational recovery (Christianson, et al, 2009; Bégin and Chabaud, 2010 quoting Lengnick-Hall and Beck, 2005). For instance, Coutu (2002) identifies three characteristics of resilient people and organizations, which include the ability to accept reality, a deep belief and strong values, and the ability to improvise. She goes on to suggest that resilient organizations regard improvisation as a core skill and have many "bricoleurs" who regularly make resourceful use of whatever materials are around.

Other researchers have downplayed the relationship between resiliency and the role of catastrophic events or crises in lieu of frameworks that emphasize an over-arching approach or mindset. For instance, one trend in natural systems assumes change, and looks upon stability as the unexpected event (Stephenson, 2010: 36, quoting Kasperson and Kasperson from The Social Contours of Risk, Volume II: Risk Analysis, Corporations, and the Globalization of Risk, 2005). Hamel and Välikangas frame resiliency as a management philosophy that actively works to avoid trauma through constant adjustments. They frame resiliency as a constant process that "…is about continuously anticipating and adjusting to deep, secular trends that can permanently impair the earning power of a core business. It's about having the capacity to change before the case for change becomes desperately obvious" (2003: 54). Similarly, Coutu portrays resiliency in terms of individuals who accept reality, strongly holding onto meaningful and stable values and beliefs, and possessing effective adaptive mechanisms that allow them to flexibly improvise in response to unexpected situations.

Bégin and Chabaud (2010) offer a model of resilience that focuses on the importance of organizational learning and the ability "…to mobilize different capabilities, to imagine a new strategy or to completely reorganize" (3). Borrowing a definition of resiliency from Lengnick-Hall and Beck (2009), Bégin and Chabaud define the term as the "organizational ability and confidence to act decisively and effectively in response to conditions that are uncertain, surprising, and sufficiently disruptive that they have the potential to jeopardize long-term survival" (41). As such, they offer a model of resiliency composed of three "intermingled dimensions": an absorption capacity which allows an organization to absorb an unexpected event, a renewal capacity that allows a firm to create new solutions, and an appropriation capacity that is linked to the lessons learned from the experience.

Bégin and Chabaud have also identified two types of organizational responses to uncertainty or unexpected events. These are a reactive/defensive approach, where a firm might adopt preventive or precautionary plans, and a proactive approach in which a firm acts to find new ways to do business. Likewise, Woods and Wreathall (2008) use an analogy from materials engineering to identify two areas of organizational resilience. The first component, identified as a first order adaptive capacity, refers to an organization's ability to cope with stress using existing capacity and capabilities. The second component, identified as a second order adaptive capacity, occurs when the demands exceed the limit of first order adaptations. Woods and Wreathall argue resiliency only occurs in this later stage, when organizations must develop new ways of working.

Finally, Gibson and Tarrant (2010) stress that organizational resilience is not accidental but rather the result of good risk management based on the assessment and monitoring of risk. They also underscore that resilience is dynamic, varying over time, and the result of a complex interplay of factors such that no single model can describe all of the dimensions of resilience. As such, they offer a 'conceptual models' approach that attempts to capture the complexity of organizational resilience. This approach, known as the "resilience triangle model", emphasizes three types of capabilities that are required for organizational resilience: process capabilities; resource and infrastructure capabilities; and leadership, people, and knowledge capabilities. Resiliency is only possible, they argue, when an organization possesses all three capabilities in some manner. This study focuses primarily on the aspects of organizational resilience that are related to leadership and organizational values.

Organizational resilience is also closely linked with competitive advantage. As such, a number of researchers and consultants emphasize the importance of taking deliberate steps to build contingency capacity and strengthening ties to employees and customers (Zook and Rigby, 2001) as well as applying core business strengths in adjacent markets (Zook and Allen, 2010). Stephenson describes resiliency as requiring strong leadership, an awareness and understanding of an organization's operating environment, an organization's ability to manage vulnerabilities, and, finally, an organization's ability to adapt in response to rapid change; characteristics that run parallel to a competitive organization. Stephenson writes that organizations are able "to leverage its strengths to adapt ahead of its competitors, and to respond to rapid changes in their market or industry sector" (2010: 1-2). Likewise, Reeves and Deimler (2011) write that competitive advantage stems from four organizational capabilities that foster rapid adaptation: the ability to read and act on signals of change, the ability to experiment rapidly and frequently, the ability to manage complex and interconnected systems of stakeholders, and the ability to motivate employees and partners.

The relationship between adverse conditions and competitive orientation has also been a subject of interest for researchers considering organizational resiliency. For instance, Covin and Slevin (2009) have analyzed the relationship between firm performance and environment. They suggest a connection between 'organic' organizational structures that allow for rapid response to external forces and hostile operating environments. They also suggest a firm's competitive orientation is positively related to firm performance in hostile environments.

This connection between resilience and competitive orientation is important because of the nature of small business itself. Although this firm category significantly contributes to the economy in aggregate, in actuality entrepreneurs are distinct from most small business owners. According to Hurst and Pugsley, few small businesses are particularly innovative or grow in any meaningful way but instead are content to provide "an existing good or service to an existing market" (2011, 2). In short, these small employers might not be competitively oriented by design, or have the broad skill set required for resiliency. A firm might lack the time or resources to address this gap, either because an "organisation is doing so well that they are working very hard to keep up, or because the organisation is already struggling and has nothing to spare" (Stephenson, 2010: 1-2).

This study frames resiliency in the ways that a firm's organizational values and leadership skills function as drivers for creating resilience, explicitly borrowing from Gibson and Tarrant, Lengnick-Hall and Beck, and Hamel and Välikangas. As such, this research measures resiliency in two ways. First, in terms of job growth, identifying those small employer firms that have been able to maintain or expand their workforce despite weak consumer demand and constraints on credit. Second, resiliency is measured in terms of a company's self-reported organizational capabilities, primarily as identified through the case study analysis. It worth noting that businesses examined might have struggled, or experienced failures, but have found ways to recover.

Quantitative Analysis

This section describes the goals, sources of data, methods, and initial results of the quantitative process. Two separate quantitative methods outlined below set out to determine what, if any, managerial techniques examined in intake and annual Interise survey data are associated with changes in employment, or resiliency. Given the limitations of the survey data (discussed below) and thus the conclusions that can be drawn from the quantitative analysis, these methods were also used to help identify promising case study firms and to begin to identify the managerial strengths that might be tied to firm resiliency. Note that the following discussion of methods is intended as a general summary. A traditional quantitative discussion is presented in the appendices from Tables 10 to 18.

There are two primary sources of data informing the quantitative analysis, first the collective data of intake and annual surveys of businesses either taking, or having taken the Interise curriculum and second, U.S. census data. Interise staff conducted intake surveys at the beginning or soon after businesses started the course in 2008, 2009, and 2010, and conducted annual surveys each year of all businesses that had taken the curriculum over the past four years. The survey data include small employer firm and firm owner demographic information such as location, income tract status, gender, immigration status and years in business.

The change in employment over time is also calculated from the survey data set. Measurements of managerial strengths, the variables that are hypothesized to influence change in employment, are drawn from a number of questions about the various aspects of strategy that small employer firm owners might implement. Finally, a number of control variables are used to isolate the impact that various managerial strengths have on change in employment. These are changes in revenue, percentage of revenue obtained through government contracts, value of loans as a percentage of revenue, and the presence or absence of a line of credit. To compare the relative performance of each firm, the change in employment is normalized across city and industry, using U.S. Census data.

By using the survey data it is possible to calculate the change in employment over time for 374 businesses in the Interise sample. This change in employment is the key dependent variable in both methods of quantitative analysis used in this study. To account for variability in industry and business environment, change relative to peer firms, rather than absolute employment change, was used. Each methodology required a different mechanism of relative comparison, however both methods make use of U.S. Census data and the North American Industry Classification System (NAICS).[5]

5 The NAICS framework organizes businesses into 20 broad industry classifications, for which the U.S. Census Quarterly Workforce Indicators (QWI) provides detailed data on employment trends. Employment data by metropolitan statistical area, NAICS industry and quarter is available for 49 states and the District of Columbia at http://lehd.did.census.gov/led/datatools/qwiapp.html.

These data make it possible to compare the performance of an individual business to those peer businesses facing similar business environments in so far as they operate in the same industry and in the same geographic location.

It is worth noting that the time interval over which change in employment was calculated is not universal. The change in employment was calculated by finding the difference between number of employees at intake and number of employees when the most recent annual survey that a business responded to took place. As such, for some businesses the change in employment is calculated from intake survey to annual survey of the same year (for 2010 businesses for example) while for other businesses, the change in employment was calculated from 2008 to 2010. Regardless of the length of the time over which employment was calculated based on survey data, that same time interval was used in the control data to calculate relative change.

The primary explanatory variables are measures of managerial techniques. These variables are drawn from the Interise survey data as well. While exact phrasing of survey questions changed over time, the techniques examined generally remained consistent and addressed the following: raising capital, financial management, accounting, business leadership, overall leadership, sales strategies, marketing, retaining customers, gaining new customers, accessing government contracts, managing employees, and using a growth plan.[6] Finally, certain factors, such as value of government contracts, changes in revenue, loans, and use of a line of credit are considered as control variables.

Given the above data and goals, two methods were used to analyze data and attempt to determine if any association between characteristics of strategy and resiliency as measured by changes in employment exists in the data. First, a series of difference in means hypothesis tests were conducted, and second, a number of multivariable linear regressions were conducted. The difference in means hypothesis tests were used in this study to analyze observational data and determine how a specific variable differs between two groups.[7] Next, multivariable linear regressions were conducted to analyze the impact that each managerial technique addressed in the annual surveys had upon the resiliency of individual firms, holding use of all other strategies constant.[8]

In order to perform the difference in means test for this study, small employer firms were divided into three groups based on employment data relative to firms operating in the same metropolitan statistical area and industry (See Table 1). These three groups are (a) firms that could be categorized as "more resilient" than peers (Groups 1 and 2), (b) those that could be categorized as "less resilient" than peers (Groups 7 and 8), and (c) those for whom available data did not provide a clear categorization (Groups 3 through 6).[9] Small employer firms placed in the "more resilient" group either added jobs or maintained their workforce in a city and industry that lost jobs. Firms placed in the "less resilient" group either lost jobs in a city and industry that was adding jobs, or lost jobs in a city and industry that was losing jobs, but lost more jobs than similar companies.

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6 Phrasing from each survey can be found in Table 14 of the Appendix.

7 A difference in means test considers how a variable differs between two groups in order to determine if that variable is associated with the characteristics that define the difference between the groups. For example, one could consider the difference in average number of advertisements between businesses that added customers and those that lost customers. In any population, a certain amount of random variability is expected, but a difference in means test considers whether the observed difference exceeds this expected random variability. When it does, the test leads to the statement that the null hypothesis that a certain variable (number of advertisements) does not vary between two groups (add vs. lose customers) can be rejected with a certain probability of certainty, generally 90 percent, 95 percent, and 99 percent certainty are reported. Stated without the double negative, the test allows the statement that the there is only a 10 percent, 5 percent or 1 percent probability that the observed difference was due to chance, and thus it can be concluded that changes in the variable of interest (number of advertisements) in someway effects the outcome considered (add vs. lose customers).

8 As stated previously, further details of specific regression equations, null and alternative hypotheses, and results tables are presented in the Appendix, which is available by request.

9 Groups 3 through 6 are not categorized, as the framework does not provide sufficient detail to definitively categorize these businesses. For example, compare two businesses: one with 100 employees that lost one employee (1 percent) in a city/industry that lost 25 percent of employees, and a second with 100 employees that lost 24 (24 percent) of employees in an industry that lost 25 percent of employees. The grouping mechanism doesn't differentiate between those two businesses, although they are clearly different; both fall within group 6. A similar lack of differentiation could arise in Group 5. If a business had 100 employees, in a city/industry adding 25 percent employees, failing to add just one employee, (a 1 percent increase) would represent under performance of peers of 24 percent, arguably marking this business as not resilient. Yet a business in group 5 could also have 5 employees in a sector that is adding employees at 10 percent per year. If this business added just one employee, they would be increasing their workforce by 20 percent, doubling the job creation of the industry. It is more difficult than the first case to argue that failing to do so marks a lack of resiliency. Group 4 is also potentially insufficiently detailed. In a city-industry increasing work forces by 25 percent, two businesses, one adding 1 percent to its workforce, and one adding 24 percent to its workforce, would both be categorized as group 4. Since these businesses are quite different, and the framework does not differentiate, Group 4 is not assigned to either the more or less resilient groups. A similar logic applies to Group 3 businesses. A business in Group 3 could be out performing the industry by 1 percent or by 25 percent, but the grouping mechanisms does not differentiate. While it is tempting to categorize Groups 3 and 4 as resilient because they are adding employees, it is difficult to determine if they are adding employees because of the success of the business's internal strategies or because of the overall market trends. As the purpose of this study is to identify strategies of resilient businesses, the authors have chosen to focus on those businesses that can be confidently categorized, and are more likely resilient, or not, because of strategic decisions, rather than the trends of the market in the business's city-industry.

Table 1: Resiliency Framework Illustrating Firm-Level Job Growth Performance Relative to City/Industry

Group	Change in FTE	City/Industry Change in FTE	Company vs. City/Industry	N
1	Positive	Negative	Company > City/Industry	127
2	Stable	Negative	Company > City/Industry	19
3	Positive	Positive	Company > City/Industry	81
4	Positive	Positive	Company < City/Industry	10
5	Stable	Positive	Company < City/Industry	17
6	Negative	Negative	Company > City/Industry	3
7	Negative	Negative	Company < City/Industry	57
8	Negative	Positive	Company < City/Industry	60

When the above framework was created, the authors expected that the 374 small employer firms examined in this study would be evenly distributed across this framework. In practice, however, businesses tend to concentrate in Group 1 (N=127), and to a lesser extent, in Groups 3, 7 and 8 (N=81, 57, 60, respectively). This could be partially explained by bias in the data set as it only contains small employer firms whose owners sought out a business-training program. Additionally, when businesses are examined by class year, the businesses from the 2008 class tend to concentrate in Groups 1 and 7 (N=62, 30, respectively) and businesses from 2010 tend to concentrate in Groups 3 and 8 (N=47, 42, respectively). Businesses from class 2009 tend to concentrate in Group 1 (N=59).

Table 2: Distribution of Firms Across Grouping Framework

Group	2008 Firms (N; percentage)	2009 Firms (N; percentage)	2010 Firms (N; percentage)	Total
1	62 (52.1%)	59 (47.2%)	6 (4.6%)	127 (34%)
2	7 (5.9%)	6 (4.8%)	6 (4.6%)	19 (5.1%)
3	9 (7.6%)	25 (20%)	47 (36.2%)	81 (21.7%)
4	2 (1.7%)	3 (2.4%)	5 (3.8%)	10 (2.7%)
5	0 (0.0%)	3 (2.4%)	14 (10.8%)	17 (4.5%)
6	2 (1.7%)	1 (0.8%)	0 (0.0%)	3 (0.8%)
7	30 (25.2%)	17 (13.6%)	10 (7.7%)	57 (15.2%)
8	7 (5.8%)	11 (8.8%)	42 (32.3%)	60 (16%)
TOTAL	119	125	130	374

While possible explanations for these changes in distribution are subject for further research and discussion, this paper suggests that the shift from a high number of businesses in groups 1 and 7 in 2008 to a high number of businesses in groups 3 and 8 between 2008, 2009, and 2010 firms is partially explained by the changes in the overall economic climate. As the overall economy began to slowly recover from the 2007-2009 recession, more environments began to experience positive growth. As Table 1 illustrates, the only difference between groups 1 and 3 is whether the city/industry experiences negative or positive change in employment, likewise for the difference between groups 7 and 8. As such, when economies began to recover in 2009, is it expected that a number of businesses in groups 1 or 7 would shift to groups 3 or 8, respectively.

Next, for 30 'managerial strength' variables measured by survey responses to Likert scale questions,[10] the difference in means test was conducted in order to determine if there was a significant difference in responses between those businesses categorized as more resilient versus those categorized as less resilient. Hypothetically, if all businesses in

10 Likert scale refers to questions of the form: on a scale from 1 to 5 please rate the extent to which you agree or disagree with a certain statement. In this case questions asked for responses on a scale from 1 to 3 and 1 to 5 depending on the survey year.

the more resilient category rated their use of a specific managerial technique as 5, and all businesses categorized as less resilient rated their use of that strategy as 2, then the difference would be 3. While such a stark difference was not observed, it serves as an example of a case in which this statistical procedure would identify a managerial technique as important.[11]

In traditional statistical trials, the treatment variable x is applied to a randomly assigned experimental group and not to a control group, and then variability in variable y between the two groups is analyzed. Since such controlled experiments are not usually possible in applied social science, this introduces significant statistical concerns. In a scientific trial using random assignment, researchers can be reasonably assured that the only difference between the experimental and control group is the treatment applied in the experiment. However, in an observational study, since the researchers did not randomly assign the groups, but rather divided the population based on observations, it is not always possible to be sure that the only difference between the groups is the independent variable. These concerns, referred to as selection bias, result from the lack of random assignment and are addressed below.

In this observational study, groups were made based on the outcome variable y in order to isolate those businesses that were very resilient and compare them to those that were less resilient. Recognizing that concerns of bias exist, the analysis was none-the-less conducted in order to derive as much insight as possible from the data available. However, the conclusions that can be drawn from this analysis are limited. While further specifics of this limitation are addressed below, it is important to state clearly that the goal of this approach was to examine most and least resilient businesses, and use statistical techniques to analyze the available, though imperfect, data, and identify strategies that appear to be used by more resilient small employer firms yet not used by those that are less resilient.

The hypothesis testing described above yields the following results, with some managerial strengths appearing to be used by more resilient small employer firms yet not as frequently used by less resilient small employer firms. These are presented in the column titled, "Significant Positive Differences" (see Table 3). There are also managerial techniques that appear to be used more frequently by "less resilient" small employer firms, listed under the column titled "Significant Negative Differences". The following results are significant at either the 5 percent or 10 percent level. Full results of the hypothesis tests, including the magnitude of difference, standard deviations, sample sizes, p-values, and significant levels, for all three years are presented in the appendices.

11 The difference in means test was performed using traditional statistical methods on 30 strategy variables to test whether the null hypothesis that the strategy of group 1 and 2 did not differ from the strategy of groups 7 and 8. Strategies for each group are the average Likert scale score given to each strategy by all businesses in the respective groups. In statistical terms:

H_0: $\text{Strategy}_{1\&2} - \text{Strategy}_{7\&8} = 0$ H_A: $\text{Strategy}_{1\&2} - \text{Strategy}_{7\&8} \neq 0$ $$t = \frac{(\text{Strategy}_{1\&2} - \text{Strategy}_{7\&8}) - 0}{\text{sqrt}[(S^2_{1\&2} / N_{1\&2}) + (S^2_{7\&8} / N_{7\&8})]}$$

Based on the two-sample t distribution, with degrees of freedom equal to the minimum of ($N_{1\&2}$ -1) and ($N_{7\&8}$-1), this test yields a p-value, the probability of observing the difference observed between the "more resilient" and "less resilient" groups, if the true population means between the two groups are equal.

The t-statistic measures the number of standard deviations away from 0 that a given difference is, while the p-value measures the probability of observing the difference that was observed if the true difference between the two groups was 0. To state in less statistical terms, the higher the t-statistic, and the lower the p-value, the more likely it is that the observed difference is a meaningful difference between more and less resilient businesses, and the less likely it is that the difference found in this study was due to chance.

Statistically inclined readers will likely question the application of the difference in means tests in this context. A sample and population have not been specified, and simple random sampling was not conducted. In spite of the lack of these traditional components of a difference in means hypothesis test, the authors stand by the use of the test for two reasons. First, the goals of this study as a whole were not to quantitatively measure the difference in adherence to strategies of a sample in order to expand findings to an overall population, but rather to take a unique, and admittedly biased, data set and analyze it in order to stimulate policy discussion and future research. Second, while survey respondents cannot be considered a random sample of all businesses having taken the Interise curriculum, nor can they be considered a random sample of all small businesses, the businesses examined represent a portion of all businesses that will eventually take the Interise curriculum and respond to surveys, and in that sense are a sample (if not randomly selected). As the research goals were to stimulate discussion and future research, the authors believe that the difference in means hypothesis tests can provide useful insight, despite methodological and statistical limitations.

Table 3: Aspects of Strategy, Results of Difference in Means Hypothesis Tests

SIGNIFICANT POSITIVE DIFFERENCES				
Strategy	**Year**	**Difference**	**dF**	**Significance Level**
I know how to make an effective case for additional funding [1-5]	2010	0.3835	57	5%
I use well thought out procedures to assess human resource needs [1-5]	2010	0.3389	57	5%
I regularly use financial data and analysis to manage my business [1-5]	2010	0.2968	57	10%
Mean of all strategies in 2010 [1-5]	2010	0.2720	57	5%
SIGNIFICANT NEGATIVE DIFFERENCES				
Confidence in marketing [1-3]	2008	-0.0365	26	5%
Confidence in retaining existing customers [1-3]	2008	-0.1937	26	10%

While the hypothesis tests are useful for examining how "more resilient" small employer firms, as a group, differed from the "less resilient" small employer firms, as a group, the method is limited. In particular, the magnitude of the difference between a small employer firm's change in employment and the industry environment's change in employment is not considered by the hypothesis test, only the implication of the difference for grouping impacts the test.[12] Also, because the hypothesis tests examine managerial techniques individually, it is not possible to gauge the impact of an individual managerial technique on an individual business, while controlling for other techniques. In order to account for these variations and to isolate the impact of individual strategies, a series of multivariable linear regressions were conducted. This made it possible to analyze the impact that each managerial technique addressed in the annual surveys had upon the resiliency of individual firms, holding use of all other strategies constant.[13] In analyzing this additional variation, and examining a specific managerial technique while others are held constant, multivariable regressions are more powerful than hypothesis testing.

In order to conduct this analysis, a continuous outcome variable for employment is needed, rather than simply an assignment of each business to a group. This variable is found by calculating the percent change in employment of each individual business, then subtracting the overall percent change in employees in the same industry and city over the same time period. This variable is referred to as the differential between company and peers. For example, to calculate the differential for a hypothetical retail sales business located in San Francisco that experienced employment growth of 5 percent over a given time period in which the retail industry in San Francisco as a whole experienced a 10 percent decline in employment, one would simply calculate 5 percent - (-10 percent) = 15 percent differential.[14] In addition to this independent variable (differential), and the dependent variable (measurements of managerial strengths), several control variables were also introduced. These variables include changes in revenue, percent of revenue obtained through government contracts, value of loans as a percentage of revenue, and the presence or absence of a line of credit.

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12 As evidenced in the previous example, this method would only consider whether a business added or lost customers, but does not consider the difference between two firms adding customers: one increasing customers by 1 percent and one by 50 percent.

13 Returning to the above example, to examine the impact of advertising on customers using regressions, consider a group of companies with performance plotted as a scatter plot on a two-axis plane, the x axis representing number of advertisements and the y axis representing change in number of customers. Next a line of best fit, which by definition minimizes the total of squared distances between each point and the line, can be drawn. The sign of the slope of this line indicates the direction of impact of the variable x (advertisements) on y (customers), the magnitude of the slope represents the strength of impact. When the slope is positive, increasing x (advertisements) is associated with increasing y (customers). When the slope is negative, increasing x (advertisements) is associated with decreasing y (customers). This is a single variable regression. A multivariable regression simultaneously considers the impact of a number of independent variables (advertisements, competition, quality of products, prices) at the same time, holding other independent and control variables constant.

14 No businesses in this sample are located in San Francisco, nor is -10 percent the actually change in employment in the retail sector. The city and data was chosen to avoid any potential confusion that this hypothetical example represents an example derived from the pool of businesses.

Table 4: Aspects of Strategy, Results of Multivariable Linear Regressions

POSITIVE SIGNIFICANT COEFFICIENTS						
Aspect of Strategy	**Year**	**Controls**	**Sample**	**N**	**Coefficient**	**Significance Level**
Overall leadership [1-3]	2008	Yes	Both	27	2.126	1%
Value of government contracts (% of revenue)	2008	Yes	Both	27	1.995	1%
Value of government contracts (% of revenue)	2009	Yes	Both	85	0.5027	5%
Effectively marketing and selling services [1-5]	2009	Yes	Full sample	104	0.2563	10%
Effectively marketing and selling services [1-5]	2010	No	Full Sample	274	0.82	10%
NEGATIVE SIGNIFICANT COEFFICIENTS						
Confidence in developing and implementing a sales strategy [1-3]	2008	Yes	Both	27	-1.589	5%
Confidence applying for government contracts [1-3]	2008	Yes	Both	27	-0.5130	10%
Using effective HR procedures [1-5]	2010	Yes	Restricted	20	-3.4202	10%
Knowing how to make an effective case for additional funding [1-5]	2010	Yes	Restricted	20	-2.9568	10%

This test of association was used for each year of data for all strategy variables measured in that given year. Table 4, above, shows the managerial strengths with significant coefficients. Variables for which a positive, significant association was found are presented in the column titled, "Positive Significant Coefficients" Variables for which a negative, significant coefficient was found are presented in the column titled "Negative Significant Coefficients." All results reported above reach either 10%, 5% or 1% significance.[15]

In this analysis the independent variable is the differential between the percentage change in employment for a given business and the percentage change in employment in the corresponding industry/city, while the dependent variables are the Likert scale responses to questions addressing characteristics of strategy or managerial strengths. In addition to the independent variable (differential) and the dependent variable (measurements of managerial strengths), several control variables were also introduced. These variables include changes in revenue, percentage of revenue obtained through government contracts, value of loans as a percentage of revenue, and the presence or absence of a line of credit.

For each year four regressions were conducted. The first regression used the full sample of all businesses, and regressed all managerial strength variables of interest on the outcome variable of interest. The second regression used the full sample of all businesses and regressed all managerial strength variables of interest and controls on the outcome variable of interest. The third regression used the restricted sample (only groups 1 and 2 and 7 and 8 of the above grouping framework) and regressed all managerial strength variables of interest on the outcome variable of interest. The fourth regression used the restricted sample (only groups 1 and 2 and 7 and 8 of the above grouping framework) and regressed all managerial strength variables of interest and control variables on the outcome variable of interest.[16]

Next, the authors aggregated the results of both statistical methods in Table 5. While the methods differ, and these types of results are not traditionally combined, the overall goal of both tests in this study was to try to determine what, if any, strategies are associated with resiliency as measured by employment. As such, results from both methods are considered in order to better understand what this imperfect data might reveal. Managerial strengths that appear to be positively associated with resiliency are presented in column one, titled "Managerial Strengths Positively Associated with Resiliency." Those that appear to be negatively associated with resiliency are presented in column two, which is named "Managerial Strengths Negatively Associated with Resiliency."

15 Significance levels are available in the Appendix.

16 Specific regression equations, variables, beta-coefficients, standard errors, and samples are presented in regression tables in the Appendix, which is available upon request.

Table 5: Synthesized Results of Hypothesis Tests and Multivariable Regressions[17]

Managerial Strengths Positively Associated with Resiliency	Managerial Strengths Negatively Associated with Resiliency	Managerial Strengths with Mixed Significant Results
- Confidence in overall leadership - Value of government contracts - Regular use of financial data and analysis - Mean of all strategies in 2010	- Confidence in retaining existing customers - Confidence applying for government contracts	- Knowing how to make an effective case for additional funding - Using well thought out procedures to address human resource needs - Sales strategy & marketing[a]

Finally, those for which both positive and negative associations were found are presented in column three, titled, "Managerial Strengths with Mixed Significant Results." The implications of this final column are unclear. While data imperfections limit the strength of conclusions that can be drawn, the authors conclude that the fact that both positive and negative associations were found suggests that the variables listed in column three are very important to get right, and only if combined with other strengths, such as regular use of financial data that allow a business to adapt to its particular strengths and environments. These variables are considered further through qualitative analysis.

The synthesized results underscore several significant associations between resiliency and characteristics of strategy, including a firm's ability to closely manage its financial position as well as the ability to maintain the strategic focus and organizational capabilities necessary to bring in new business, be it government contracts or other clients, during adverse economic conditions. These particular associations had already emerged in the individual quantitative methods. Moreover, given data availability, the authors anticipated that these synthesized results would be somewhat inconclusive. Even so, the aggregated results underscore several managerial strengths that helped inform and guide the qualitative methods discussed below.

Qualitative Analysis

This section describes the goals, sources of data, and methods used in the qualitative process. The methods outlined below attempted to identify any connection between job growth, a measure of resiliency, and characteristics of strategy. These methods were informed by the quantitative analysis, which offered a framework to identify promising case study firms as well as the initial results, which helped to identify the managerial strengths that could be tied to firm resiliency.[18]

The qualitative analysis is informed primarily by interview data collected from a sample of owners of small employer firms. This sample was chosen based on a number of criteria. One criterion for inclusion was based on job growth performance in relation to the city and industry, as established in the grouping framework (see Table 1). Additional selection criteria for the case study analysis included those firms that had been in business long enough to survive at least two national or regional recessions, employ at least five full time workers and are located in an LMI area.

Based on these criteria, a number of firms were contacted for phone screening and, in some cases, for in-depth interviews. These in-depth interviews involved the participation of 16 small employer firms and make up the backbone of this research. All interviews were semi-structured and conducted from August-September 2011; the names of the businesses and business owners have been anonymized for confidentiality.[19] The interviews consisted of a series of questions posed to the business owner to understand firm performance and the managerial strengths that each identified as critical to the stability and growth of the business. Firm owners were also asked to identify current challenges. All responses were self-reported. These responses were categorized according to a combination of induction and deduction methods.[20]

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17 a) Phrasing of sales and marketing questions was especially variable. See the Appendix for further results.

18 In-depth data about the interviewed and screened firms can be found in Tables 19 through 22.

19 Detailed information on the case study small firms can be found in Table 6, on pages 17-18. Additional information about the case study firms, as well as the screened firms, can be found in the Appendix.

20 Categories are identified in Tables 21 and 22 in the Appendix.

The case study analysis made it possible to view the survey results with greater confidence, and to develop more precise ways of interpreting this data. Since the overall goal of the research was to determine whether there is any relationship between firm resiliency and particular managerial strengths, the preliminary results of the survey analysis (see Table 5) provided the research team with notions about the particular characteristics that firm owners might be more likely to identify as important during the interview process.

Given the above data and goals, the primary method of exploring association between characteristics of strategy and resiliency focused on a case study interview process. The first step of this process consisted of identifying eligible small employer firms, which was accomplished by returning to the 374 businesses examined in the quantitative analysis. Next, a series of criteria was applied to these businesses. These included businesses: (1) operating in a low- or moderate-income census tract, (2) possessing a minimum of five employees, (3) that have survived at least two national or regional recessions or downturns, and (4) that have studied Interise curriculum no later than 2009, in order to have the time to incorporate business training. Low- or moderate-income census tract status is a fixed criterion for two reasons. Interise seeks to contribute to economic revitalization in lower income communities, and focuses in particular on women and minority firm owners. Additionally, these communities are traditionally underserved and resource-constrained so they were expected to have faced greater challenges during the recession and subsequent economic uncertainty.

Additionally, a minimum of five full time employees at intake was set in order to ensure that this aspect of the study excludes sole proprietor firms and includes growth firms as well as those that are primarily focused on survival (McFarland et al., 2010: 5-6). Finally, experience in two national or regional recessions or downturns was included as a criterion. It is worth noting that, as a practitioner-based study, this research is intended to contribute to best practices about how business training programs might maximize their impact on growing firms in lower income environments.

A total of 88 small employer firms fit these basic eligibility criteria. This group of potential case study candidates were further narrowed based on distinguishing social and cultural criteria. This included industry, race and ethnicity, and any distinguishing firm characteristics. The authors also sought recommendations from Interise instructors for the owners of small employer firms who would be able to clearly articulate their business model and strategic planning. Distinguishing firm characteristics also included some attention to firm placement in the resiliency grouping as calculated during the quantitative process (see Table 1). As such, the majority of these firms were ranked as higher resiliency, although the screening calls and case study interviews later suggested that many of the firms examined might actually belong in different categories–or that the grouping framework was not nuanced enough.

In all, 55 firms were contacted (by phone and email) and invited to participate in this research. All participating firm owners were offered confidentiality. Seven of the initial businesses were eliminated from consideration because of significant changes in the owner or management structures, or because the business had shut down or been sold. Of the remaining forty-eight eligible businesses, twenty-six owners agreed to the screening call, and 16 of these firms agreed to participate in the in-depth interview process.

The screening call focused on basic questions such as the current number of employees (full- and part-time), revenue, and profit margin. Firm owners were also asked a general question about managerial capabilities and firm success: "In terms of strategies employed, why do you think you've done as well as you have in the current economic climate?" to gather a base understanding of the characteristics of strategy that owners reported as most important to firm success.

Next, firm owners were invited to join the formal case study process and participate in an in-depth phone interview (approximately 60 minutes). 16 firms (33.3 percent) agreed to participate in these in-depth interviews, which were recorded. The longer interview posed a number of additional open-ended questions about characteristics of strategy as well as about the key challenges facing the firm. In addition, owners were asked to describe how his/her business had fared in the recession and ongoing economic uncertainty as well as to describe how his/her firm has survived.

Table 6: Case Study Interviews, by Firm Type, Job Growth, and Differential[21]

	Firm Type	Years of Experience[a]	Annual Revenue[b]	Job Growth, by FTE				Resiliency Grouping / Differential[c]
				2011	2010	2009	2008	
CS1	Retail trade – furniture	15	$2.5 - 5 million	20.5	20	7.5	--	1: Added jobs 169.29% faster than losing city/industry
CS2	Welding & fabrication	23	$1 - 2.5 million	10	8	5	--	1: Added jobs 72.85% faster than losing city/industry
CS3	Electrical contracting/ construction	14	$2.5 - 5 million	44		47	--	1: Added jobs 35.18% faster than losing city/industry
CS4	Architecture	11	$1 - 2.5 million	35	31	31	21.5	1: Added jobs 67.40% faster than gaining city/industry
CS5	Restaurant	10	$.5 – 1 million	37.5	60	27.5	11.5	1: Added jobs 426.49% faster than losing city/industry
CS6	Restaurant	16	$1–2.5 million	40	45	37.5	32.5	1: Added jobs 44.80% faster than losing city/industry
CS7	Healthcare intermediary	13	$13 – 18 million*	40	25.5	15	16	1: Added jobs 75.73% faster than losing city/industry
CS8	Software-as-a-service (SaaS)	12	$3 – 3.5 million	42	38	37	37.5	2: Maintained jobs at -3.68% in losing city/ industry
CS9	Emissions testing	15	N/A	8	N/A	8.5	6	1: Added jobs at 49.61% faster than losing city/industry
CS10	Janitorial supply	6	Approx. $5 million	15	16	14	--	1/5:[d] Added jobs 10.18% faster than gaining city/industry
CS11	Security services	7	$2.5 - 5 million	225	175	70	--	3: Added jobs 137.19% faster than gaining city/industry
CS12	Pest control	32	Less than $0.5 million	16	11.5	7.5	--	3: Added jobs 39.81% faster than gaining city/industry
CS13	Recycling services	8	$1.7 million	38	27	14	--	3: Added jobs 79.33% faster than gaining city/industry
CS14	Pest control	18	Approx. $0.7 million*	10	N/A	9	7	3: Added jobs 11.20% faster than gaining city/industry
CS15	Biotech consulting	5	N/A	15	N/A	8	--	N/A
CS16	Manufacturing firm	10	$0.5 - $1 million	10	11	13.25	--	N/A

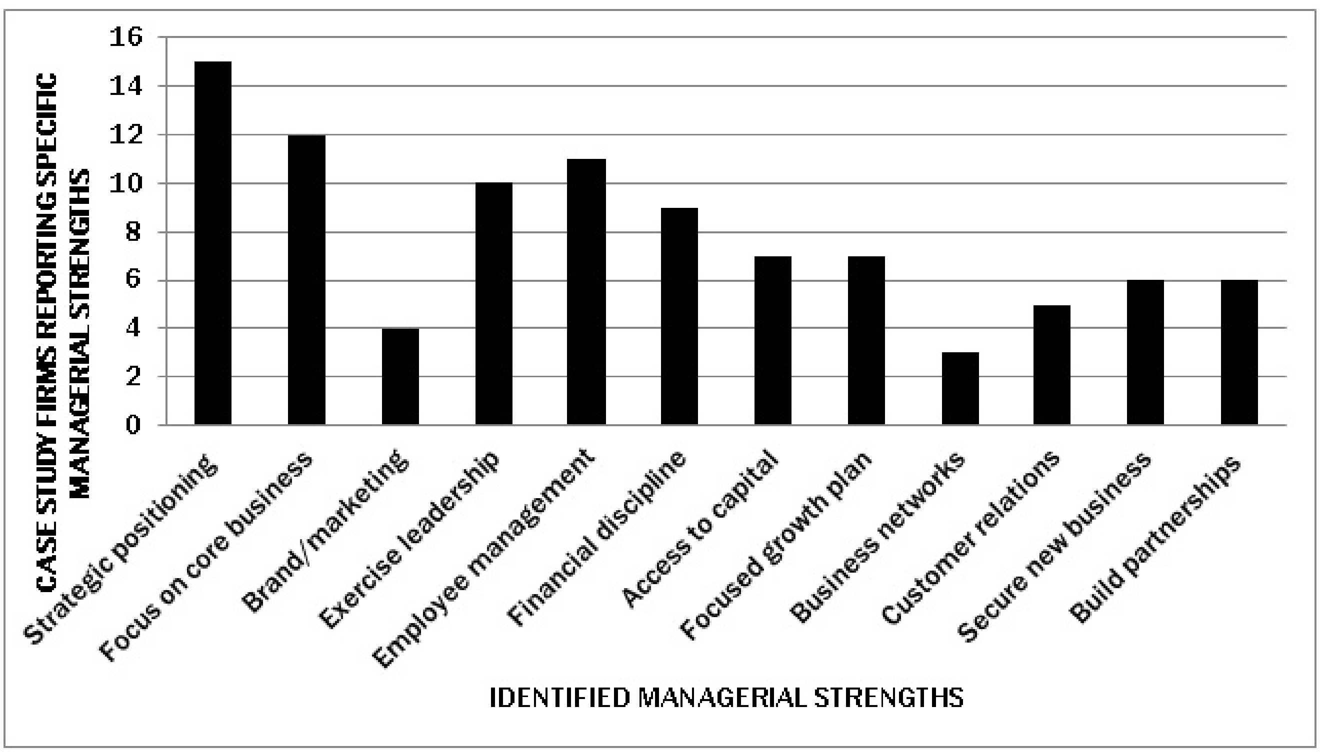
21 a) Refers to years that firm owner has operated business, not necessarily age of business.
b) Based on publicly available Manta data for 2011, unless marked with an asterisk and supplied by business owner.
c) Both the grouping framework and the differential were devised as part of the quantitative analysis.
d) Industry change between 2008-2009.

Once these interviews were completed, responses from both the interviewed firms and screened firms were categorized into the most commonly identified managerial strengths and key strategic challenges.[22] "Most commonly identified" was determined by the responses provided by more than one in three case study firms. The interview responses associated with the 16 interviewed firms became the backbone of the qualitative analysis. Responses from ten screened firms were also categorized. Although the screened firm data was not sufficiently detailed to be included as case study data, this data was used to help confirm interpretations.[23] The case study data appear in Tables 7 and 8.

Translating interview responses about operating procedures, job growth, strategy, and challenges into commonly understood characteristics of strategy made it easier to identify any relationship between managerial strengths and firm resiliency. This process was based on inductive and deductive methods of coding responses. The deductive method focused on common elements of strategy, namely strategic positioning and strategic advantage (Porter, 1996). The inductive method focused on grouping the responses based on language and concepts articulated by the small business owners. This second approach captures the vernacular responses of small business owners alongside more formal business terms and concepts, a useful research strategy given the practitioner-based focus of this study.

In particular, these responses help to accurately express how small business owners conceive of risk and uncertainty, and how these mental models are translated into practice. This approach represents a critical–and under explored–avenue of study. For instance, in his research on small business and crisis management, Herbane has suggested that small business owners often conceptualize risk in chronological terms, even as owners might actually respond in terms of perceived vulnerability (2010), a gap that is not captured in many examinations of small business success. The case study results appeared to support this research. For instance, when the research team asked participants an open question about "strategic challenges", many firm owners spoke about management or marketing challenges–both presumably immediate challenges. Far fewer framed the challenge as one of needing to secure new business or needing to ensure they were adequately prepared for growth. In other words, case study firm owners appeared to frame risk in terms of perceived threats or immediate needs. Of course, this is not the primary focus of this study, although it does underscore the methodological importance of relying on case study interviews.

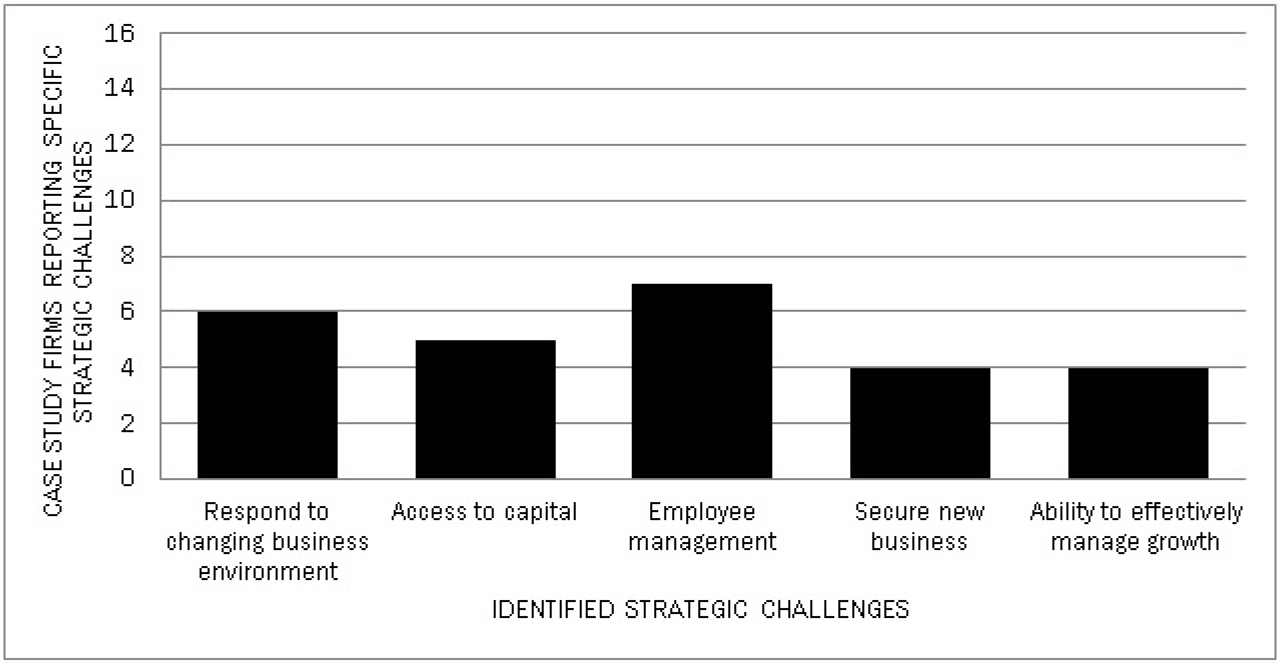
Table 7: Managerial Strengths, Case Study Results



22 The categorizations can be found in Table 21 and 22 in the Appendix.

23 Interview responses of the screened firms, and the categorization of these responses, can be found in the Appendix.

Table 8: Strategic Challenges, Case Study Results



Integration of Analyses

Next, the results of the qualitative analysis were integrated with the results of the quantitative analysis, before these preliminary interpretations were assimilated into existing literature on firm resiliency. Although this study is not focused on race and ethnicity, the populations examined in each methodological approach vary by potentially meaningful ways. In particular, the survey data reflects minority-male owned businesses at 45.6 percent, woman-owned businesses at 35.4 percent, and minority-woman owned at 21.7 percent, as illustrated in Table 9.[24] This is higher than the national average, of roughly 29.2 percent and 7.1 percent, respectively, of nearly 29 million U.S. firms.[25] This is largely due to Interise's programmatic focus on small firms operating in lower-income communities or by traditionally underrepresented groups. The case study analysis reflects minority- and woman-owned firms at 43.75 percent and 12.5 percent, respectively. Among total case study firms, non-minority male owners are over-represented and female firm owners are under-represented, as compared to the national average. This is an artifact of the research process. The research team took steps to reach out to firm owners identified as belonging to a range of race/ethnicity and gender categories. However, the actual composition of the case study analysis was dependent upon the firm owners who were willing to participate in the qualitative research process. As this study was not focused any relationship between managerial strengths and job growth, no attempt was made to explore any role that race/ethnicity and gender might play in firm resiliency.

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24 This table reflects the composition of the owners of small employer firms who participated in the qualitative analysis as well as the composition of the firms examined in the quantitative analysis. It is tabulated from self-identification of gender and selection of race/ethnicity from the following options:

- White (Caucasian), non-Hispanic
- Black (African-American)
- American Indian or Alaskan Native
- Asian
- Hispanic/Latino
- Mixed/Other
- I prefer not to answer

Note that, in some cases, the small firm owner is classified in more than one category. Respondents who self-identified as any race/ethnicity other than "White (Caucasian), non-Hispanic" are considered "minority", while respondents who self-identified as "American Indian or Alaskan Native" are considered "native."

25 These figures are calculated based on the demographics of firms examined in this survey (see Table 20 in Appendix) and compared to national averages pulled from the SBA, among them the SBA website and 2010 report entitled "The Small Business Economy: A Report to the President". Note that the SBA figures are from 2008.

Table 9: Small Firms Represented in Mixed-Methods Analysis, by Race/Ethnicity and Gender

	Total Interviewed Firms (n=26/ percentage)	Case Study Firms (n=16/ percentage)	Total Survey Firms (n=374/ percentage)
Minority-owned	12 (46.15%)	7 (43.75%)	251 (67.11%)
Minority male-owned	9 (34.62%)	6 (37.5%)	170 (45.6%)
Woman-owned	5 (19.23%)	2 (12.5%)	132 (35.4%)
Minority woman-owned	3 (11.54%)	1 (6.25%)	81 (21.7%)
Native-owned	1 (6.25%)	1 (6.25%)	58 (15.5%)
Non-minority male-owned	12 (46.15%)	9 (56.25%)	71 (19%)

Although it is not possible to establish causality with the datasets available in this research, these results consist of three types of findings: aspects of strategy positively associated with resiliency, aspects of strategy negatively associated with resiliency, and identified strategic challenges. The quantitative analysis suggests that certain characteristics of strategy appear to be associated with more resilient businesses, and that other characteristics of strategy appear to be associated with less resilient businesses. The quantitative results also suggest that certain managerial strengths appear to be associated with both more resilient and less resilient firms.[26] The case study analysis also revealed firm owners' identified strategic challenges. Although these results measure something distinct from results of the managerial strengths negatively associated with resiliency, interpreted together they might suggest that properly executed strategy is challenging and gaps in leadership are relatively common. Finally, these results are considered in relation to existing research on organizational resistance.

Limitations

These conclusions are preliminary, limited by particular characteristics of the datasets–ranging from sample size and quality of self-reported data and possible researcher bias to the methodological challenges of mixed methods research. There are a number of caveats to relying on the available datasets for the quantitative analysis. First, in order to maximize sample size, the quantitative analysis considered changes in employment over all intervals when it was possible to calculate that change. As such, for some businesses, change was calculated over six months, while for some, change was calculated over three years. Second, the overall sample size is relatively small: for hypothesis tests of difference in means the combined size of the two groups analyzed for 2008, 2009, and 2010, is 66, 84, and 124 observations respectively, while for the multivariable regression analysis, sample size was 27, 85, and 20 for the most restricted samples for 2008, 2009, and 2010. While these small samples yielded several significant coefficients, it is likely that further associations could be found with a larger dataset. Fortunately, the curriculum studied here has continued, and sample size for future analyses increases each year.

A third limitation of the quantitative date set is the method of measurement of the strategy variables. These variables are measured by a series of Likert scale questions in intake and annual surveys. In addition to response and self-reporting biases, this measurement of strategy is limiting for three reasons. First, Likert scale questions are by nature relatively imprecise, with only 3 or 5 discrete options rather than a continuous range of possible values. Additionally, Likert scales are open to interpretation and equal values do not necessarily equate to equal actions in pursuit of a specific strategy. Second, the Likert scale questions in annual surveys changed from year to year. This exacerbated the sample size limitation by requiring that each year be analyzed individually, rather than collectively. Finally, by requesting responses to a specific list of strategy variables, the survey mechanism has limited the possible universe of strategies considered. This limitation is addressed via the qualitative case study section, which seeks to solicit unfiltered opinions of resilient business owners regarding the strategies that they believe make them most successful.

26 Both the limited statistical significance of the results as well as the mixed association of particular managerial strengths (or aspects of strategy) suggests an overall weakness in the surveys themselves. This is discussed in greater detail in the examination of study limitations in Section II.

The final, and most important, limitation is bias. The sample of businesses that chose to take the Interise curriculum is not a representative sample of businesses. The choice to participate in the curriculum shows initiative, devotion, and a desire to improve, all qualities that are likely to be associated with owners of resilient small businesses, as such there is a definite selection bias of the entire sample, in addition to the response bias of the survey mechanism. Those businesses responding to the survey are more likely to be resilient than the overall population, if only for the reason that a business that had failed likely would not have responded to the survey, which prevented the analysis of any especially less resilient businesses and biased the sample. Furthermore, the measurements of managerial strength introduce additional bias. As such, and as stated above, results cannot be generalized to populations. However, while these limitations affect generalizability, as a practitioner research paper, the quantitative analysis is intended primarily as a stimulus for further policy discussion and a guide for the qualitative aspects of this paper, rather than a statistically authoritative conclusion to questions regarding the determinants of resiliency.

There are also a number of limitations to relying on the qualitative dataset. First, the case study interviews focused on a limited number of small employer firms. Unlike the quantitative research, which examined survey data from nearly 375 businesses grouped according to resiliency, the case study interviews focused on a more selective sample. The number of in-depth interviews consisted of 16 small employer firms. This was due, in part, to the relatively small number of firms that both fit the criteria and responded to requests to participate in this research. This small sample size meant that qualitative data was not complete enough to be able to generalize by region or industry type. Another critical limitation of the small sample size meant that the case study interviews largely focused on businesses that initially had been ranked as "higher resiliency" (groups 1 & 2 in the grouping framework). It is likely that further association could be found with a larger dataset, particularly one that included firms initially ranked as lower resiliency. At the same time, the interviews suggest that a number of the firms likely had slipped into a lower framework grouping. This supposition is based on the number of reported employees and on interviews with small business owners who reported major, immediate challenges to the stability and growth of their business and described themselves as "in the trenches" or "battling to survive." This lack of clarity implies that the grouping framework might need to be further developed. This degree of uncertainty also suggests that it might be challenging to identify distinctions between the managerial strengths of the most resilient firms and those less resilient firms.

A second limitation occurs through the process of translating interview material into categories and then again into strategies, presenting multiple opportunities for researcher bias. This bias is difficult to fully eliminate, although a larger sample size might have helped mitigate author bias. A related limitation is the relative inability to independently verify information offered by the owners small employer firms in surveys as well as in case study interviews. In both instances, the answers were self-reported. Because these businesses are privately owned, it was not possible to determine the accuracy of financial indicators such as cash flow, cash reserves, operating cost as percentage of gross revenue, profit margin, and the debt-to-equity ratio, or the numbers of full time employees. That said, administering a follow-up survey to the 374 small employer firms examined in the quantitative research would help to mitigate this "noise" in the research datasets. Such a survey would also work to more thoroughly integrate the quantitative and qualitative research findings, and might be pursued through future research.

Third, the strength of an analysis across these data sets is not only limited by the quality of the datasets themselves, but also by the ability to harmonize these data sets across methodologies. In particular, it proved challenging to consistently measure "resiliency" as initially defined across the methodologies. It was impossible to gauge whether firm owners interpreted survey questions in a consistent way. Perhaps a greater challenge existed in the normalization of unfiltered opinions of resilient business owners back into categories as constructed in the surveys, but without narrowing the range and nuance of the interview responses. Ideally, this analysis would have integrated the qualitative findings with a follow-up survey administered to all of the small employer firms whose data was considered in the quantitative research. This would be a critical first step in conducting rigorous, mixed method analysis and might be pursued through future research. These limitations are certainly worthy of consideration, yet they do not invalidate the initial conclusions presented in this study. Just as the sample size for the future analyses continues to grow with future classes, an analysis that includes even a limited number of case studies presents a significant opportunity for researchers and policy makers to better understand how small firms manage through uncertainty and how macro- and micro-business decisions are impacted by these challenges. Furthermore, the overall goal of the analysis was to identify the organizational skills that appear to be associated with resiliency in order to stimulate dialogue within the policy community and guide future research. While these limitations prevent overall generalizability of results to a larger community of small businesses, the conclusions lay critical groundwork for policy interventions and small firm training programs interested in developing the kinds of entrepreneurs that can thrive during periods of economic uncertainty.

Section III: Leadership Capabilities and Resiliency

One of the more intuitive hypotheses about small business resiliency during economic turbulence is that some companies are better prepared to handle the uncertainty and disruptive challenges than others. These businesses might have accumulated the infrastructure, resources, leadership capabilities, or networks to better survive economic challenges. Setting aside the degree to which some industry sectors might thrive during recessionary periods, this practitioner-based study considers whether it might draw out particular characteristics of strategy that small business owners employ that better equip their companies to weather market volatility, as measured by growth in employment in relation to industry.

To explore this question, the research team employed multiple quantitative and qualitative methods. Based on this mixed-method approach, this study proposes five capabilities that help create resilience amidst a changeable business climate. These five capabilities are (1) the effective use of measurable indicators, (2) the ability to correctly assess firm strengths in relation to the market, (3) the ability to plan effectively, (4) creativity under pressure, and, (5) adaptability, referring to the ability to dynamically revise aspects of the firm's operational agenda in response to a changing environment. This section considers each of these capabilities in turn, demonstrating how the study results and existing research support these interpretations. Each capability is further illustrated through examples of case study firms that illustrate varying competencies in these organizational capabilities.

This section also considers how these capabilities are deeply interrelated with one another and, in aggregate, constitute properly executed strategy in a volatile business climate. For instance, competency with measurable indicators is a core skill that is required for firm success, regardless of economic climate. However, during periods of economic instability, when profit margins tend to shrink and competition becomes more intense, these indicators serve as valuable feedback mechanisms for small business owners. Likewise, effective assessment of strengths and opportunities and effective planning are "second-order" organizational skills that allow a firm owner to effectively respond to market or industry shifts (Reeves & Deimler, 2011). Each builds upon the effective use of measurable indicators. Likewise, it stands to reason that both the effective use of these indicators and the correct assessment of firm opportunities are required in order to plan and implement effectively. Creativity under pressure refers to an overall approach to implementing strategy on the fly. Finally, adaptability depends upon all four to be successfully implemented, particularly during periods of volatility. In short, it would be difficult to be good at one of these capabilities without being good at another.

Capability #1: Resilient small employer firms make effective use of measurable indicators

Measurable indicators are critical for firm success, providing a business owner with the tools to manage costs and track output (Porter, 1996).[27] It stands to reason that close oversight of these indicators becomes more critical during periods of economic uncertainty, when consumer demand weakens and competition becomes more intense. Indicators can help a business manage lower profit margins as well as take advantage of opportunities.

Conventionally, small employer firms might rely on measurable indicators to simply survive. However, resilient small firms employ these tools to manage through the challenges of growth. Indicators can also help companies prepare for volatile periods before they even occur (Gibson and Tarrant, 2010). They also use indicators to build the internal structures and capacities required to "act decisively and effectively" in response to uncertain conditions (Bégin and Chabaud, 2010, 41). Thus, companies can identify valuable customers and emergent customer demands as well as developing the measures needed to delegate responsibility and build a management team. Both are vital to firm success, and both depend upon the regular use of financial tools to help guide the owner's business decisions. Each is considered in turn, after an examination of the overall data results.

The "effective use of measurable indicators" is one of the managerial strengths most definitively supported by the study results. The difference in means hypothesis tests revealed a strong association between use of these financial

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27 This has been pulled from authors' conversations with Peter Russo. For a more general examination of the role of "operational effectiveness" and a company's ability to achieve superior profitability when it is able to deliver greater value and thus be able to charge higher unit prices as well as when it is able to achieve greater efficiency and thus pay lower average unit costs. Attention to price and cost requires a close attention to measurable indicators.

tools and resiliency.[28] In addition, more than 55 percent of case study firms (nine firms) identified the competent use of financial data and analysis tools as critical to company growth. At least three of these firm owners spoke about vital importance of paying regular attention to cash flow and accounts receivable. A number of screened businesses also identified the importance of financial discipline. For instance, the owner of an environmental construction and technology company credited financial discipline with firm success. "This allowed us to maintain more than 100 percent growth for four or five years," he noted.[29] He reported that his business grew by 40 percent in 2011.

Maximizing Customer Demand

Measurable indicators are vital for small firms to maximize customer demand and increase sales by tailoring opportunities to a firm's most valuable customers.[30] They are also critical for businesses to make effective pricing decisions that drive customer demand. Although Zook and Rigby have pointed to the significance of valuing important existing customers, suggesting, "loyalty is not just the way out of a recession … (but) the way back to better-than-normal prosperity" (2001), it also stands to reason that finding new customers is also vital for firm resiliency. In fact, approximately 30 percent of case study firm employers (five firms) identified financial monitoring tools as critical in helping them to make the kinds of strategic shifts that could help a business take advantage of emergent demand. Further, at least 10 percent of firm owners (two businesses) reported that these monitoring tools allowed them to balance the need to reduce costs with the need to increase prices charged. Because there is often downward pressure on pricing during challenging economic conditions, close financial management helps a resilient firm owner decide when to take business and when to "walk away". Most of a company's profit comes from a minority of its customers.[31] For these reasons, when a company knows its most valuable customers, it can identify opportunities to sell them new products and target them with appropriate offers. In short, these customers help a firm to sell more.

Delegation and Employee Management

The competent and consistent use of measurable indicators is required for small businesses to effectively manage employees. These indicators are critical for a firm to be able to develop the indicators required to delegate authority, and then monitor the management-level employees. Just as critically, employees are a core asset and should be treated as such, particularly during challenging economic periods. They should be part of a larger plan to protect a company's core assets (Zook and Rigby, 2001).

Research suggests that human resource needs–hiring and managing staff–present significant challenges for many small businesses (Edward Lowe Foundation, 2011). It was also a complex factor in this study. The regression tests imply that the use of effective human resources procedures is negatively associated with job growth. However, the difference in means hypothesis tests indicate a positive association between resiliency and the use of "well thought out procedures to assess human resources needs." These mixed results suggest that firm owners recognize that employee management is important, even if they often struggle with identifying their most critical needs and then finding the right employees to fulfill those needs. Likewise, among case study firms, owners also spoke about the challenges of being able to effectively delegate tasks. 68.75 percent of case study firms (11 companies) reported that employee management was critical to maintaining a stable company. Of these, four owners had identified staffing challenges as a limit to firm growth. They reported that they needed to develop better employee management structures, but were uncertain how to go about developing and implementing such plans. In several cases, these business owners said that they had made poor staff management decisions that resulted in significant additional expenses and missed opportunities. These owners seemed anxious about making a similar mistake again.

When interpreting the results as a whole, the authors propose that effective employee management is a critical aspect of resiliency because it provides a mechanism for an owner to delegate responsibility. Measurable indicators are vital to job growth because they are the paths by which an owner learns to delegate, holding an employee responsible for achieving a measurable goal without direct supervision. This is what allows a firm to scale.

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28 It should be noted that the value of regular monitoring and analysis is not demonstrated in the regression analysis.

29 This firm is identified as SB24 in Table 21, in the Appendix.

30 Based on authors' conversations with Peter Russo.

31 Ibid.

Using Measurable Indicators To Maximize Position[32]

Case Study Firm at a Glance
Industry: Janitorial supply **Location: Dallas, Texas**
Years as business owner: 6
Number of full time employees (FTEs) in 2009: 14
Number of FTEs added in 2010: 2
Number of FTEs added in 2011: -1
Outperforming city/industry, in 2010: 10.18%
Revenue in 2011:[a] Approximately $5 million
Reported increase in revenue (in 2010): -$350,000
Secured new financing since 2008: $250,000 line of credit

One firm that has made effective use of measurable indicators in a way that helped the firm grow its workforce despite recession-related challenges is a 25-year-old janitorial supply company. According to 2010 figures, the firm operated about 10 percent better than the industry average. It has done so by implementing procedures to accurately monitor the firm's inventory, profits, and cash flow, and in the process map the company's financial health. The owner then used these insights to overhaul the company's business model. These changes allowed the owner to take advantage of new markets that maximized customer demand as well as develop the firm's management team. The owner reported that these changes occurred in late 2008, at a time when the firm's expenses were growing more quickly than its revenue.

When the owner took over the company from his father in 2007, the firm catered to the local Korean businesses and had been run the same way for years. The owner noted that he had always thought that competing firms were the biggest threat facing the company. However, once the new owner took a "hard look" at the company costs, he reported that the firm inefficiencies could be "drastically improved," helping to secure the business's future. The owner first brought company costs under control by computerizing the firm's inventory system, which allowed him to trim inventory by bringing down debt stock. A new processing program also allowed the owner to cut the company's credit card processing fees in half. Finally, he reviewed the firm's vendors and saw a further opportunity to trim inventory costs by joining a national buying group.

Next, the owner overhauled the company's entire business model. The owner recalled that the move was risky and "unorthodox in the industry," but the company held no debt and he was able to secure a bank loan and additional lines of credit. The owner decided to stop pursuing contracts with local businesses, a common model in the janitorial supply industry, and adopt retail strategies instead. "We're like a convenience store for janitors," the owner said. This shift allowed the firm to maximize customer demand and have a better understanding of its most valuable customers. Previously, the supply company catered to Korean immigrant businesses, and the owner reported that he felt bound by long-standing commitments to 'friends and family' pricing. However, once the firm moved away from an immigrant-oriented contract business to one catering to independent customers working in the cleaning industry, the firm was able to squarely compete on price and value. The firm has adopted a variable pricing scheme, a move that has helped the firm to maximize its profits by increasing prices on items in greatest demand. This shift allowed the firm to increase its profit by an estimated 500 percent between 2007 and 2009, which amounted to approximately $400,000.

These operational changes also allowed the firm to expand its management staff. Once the owner had minimized the firm's costs, he had enough funds to hire a general manager to handle day-to-day business operations. Although the recession prevented the owner from expanding to a second location as he had initially planned, this hire has been critical to the owner's ability to grow jobs in his community. It is not clear that this firm owner has continued to demonstrate a commitment to innovation and strategic thinking with this company, although he did report that he was now in the process of starting another company.

32 a) Based on business owner's self-reported figures.

Other entrepreneurs have been less adept at using measurable indicators to drive consumer demand and develop the employee management techniques in a way that positions the company to be more likely to maintain or grow its workforce despite market challenges. A recycling services company provides a useful example.[33] The company collects an estimated 200 tons of unwanted scrap building materials from contractors and manufacturers. 80 percent of this content is diverted for reuse; much of it is resold overseas.

Although the recession demonstrably impacted the construction industry in Philadelphia, the firm has continued to expand. Yet, according to the owner, the company also faces significant leadership challenges caused, in part, by failing to use measurable indicators to build firm capacity and thus better prepare the firm to respond to unexpected opportunities and challenges. The owner said that he and his co-founder had no regard for margins in the beginning. In the first three years, he said, finances were a constant battle. According to the owner, the firm's slower growth in the past several years is due to the firm leaderships' inability to sufficiently prepare for growth by building a management team able to cope with this growth. Now, the owner reported, "I'm just spending twelve hours a day putting out fires". The owner continued, "Without the right people in pace, we're losing our ability to innovate," suggesting that the owner has not been able to adequately focus on the larger strategic challenges the rapidly growing company faces. In short, the firm has failed to establish measurable goals by which to measure management-level staff. This is not simply a challenge of missing new business opportunities but one that could also threaten the future of the company. In the meantime, it also threatens the firm's ability to successfully navigate periods of economic uncertainty.

Capability #2: Resilient small employer firms accurately assess strengths and demonstrate market awareness

A firm owner's ability to accurately assess firm strengths and demonstrate market awareness during a volatile economic climate is a second capability that appears connected to firm resiliency (Gibson and Tarrant, 2010, 4). This second-order skill is particularly useful if a company is going to be able expand or shift the markets in which it operates. To do this, a business owner must know how to use the company's strengths to take advantage of emergent opportunities within or adjacent to the firm's core business (Zook and Allen, 2010; Porter, 1996; Reeves and Deimler, 2011). This could include identifying nascent consumer demand and other market trends.

Without a disciplined focus on identifying alternative responses, a firm might rely too heavily on established growth plans and established customers, including government contracts, and thus fail to proactively respond to economic uncertainty. According to Reeves and Deimler, one particular challenge facing small business is an over-reliance on models created for larger companies that don't take advantage of the agility of small employers (2011). Alternatively, a company that is unprepared to make strategic shifts might chase any opportunity to bring in new business, and in the process, stray too far from its core strengths. As such, Zook and Allen suggest that a business must continually reinvest in its differentiated core business, taking care to ensure that the core is maximizing its economic potential (2010).

Hamel and Välikangas take a distinct approach to the need for a business to make strategic shifts, although to similar ends. They argue that companies must work to not only get better but also to "get different", suggesting that the only dependable way of navigating market volatility is for a business to reinvent its business model before circumstances make this shift a necessity (2003, 53). In either case, resilient small firms must constantly monitor firm strength in relation to the external business climate. For instance, an owner might need to determine how–and whether–to take advantage of emergent opportunities, without overreaching or jeopardizing a firm's stability. In practical terms, a firm owner will need to demonstrate leadership, determining how to pivot from its core business while also considering how to take advantage of emergent opportunities. This will be examined in greater detail following an explanation of the evidence of this capability in the data results.

The survey data analysis revealed a number of managerial strengths that appear to support the authors' conclusions as well as the existing research. First, "confidence in overall leadership" emerged as a managerial strength positively associated with resiliency. On its own, this is a general statement that could be attributed to many aspects of strategy.

33 This firm is identified as CS13 in Table 6. Additional information about the firm is in Table 21 in the Appendix.

However, when viewed alongside the case study interviews themselves, the authors conclude that the firm owners who are able to maintain a clear grasp of their business's strategic advantages while steering clear of its weaknesses are more likely to succeed. Most likely, this is particularly true during periods of economic uncertainty. In particular, business owners reported that "exercise(ing) leadership" and "strategic positioning" were critical to firm stability and growth by nearly 65 percent and 95 percent of case study firms (10 and 15 businesses), respectively. Likewise, nearly 40 percent of companies (6 businesses) identified the ability to "respond to a changing environment" as a key challenge of succeeding in uncertain economic times.

The qualitative results also support this leadership capability. Although the survey did not include any questions regarding resiliency or the ability to accurately assess strengths and opportunities, interviews with the case study businesses suggest that "strategic positioning" is strongly associated with resiliency.[34] This underscores the importance of a firm owner's capacity to gauge how a firm might adjust to the market shifts.

Pivoting from the core business

Among resilient firms, perhaps the first step of determining the firm's relative strengths requires a candid assessment of that company's core business and its demonstrated ability to add value. From there, a firm is well positioned to pivot to respond to crises or build capacity to take on bigger and/or more complex assignments, such as opening up multiple locations or expanding into a related industry. Among case study firms, 75 percent (12 companies) identified their ability to focus on their core business as critical to their success. Not all of these firms strengthened their core to be able to take on new challenges.

Retaining customers and finding new ones

Resilient small firms also adopt a certain stance toward customers, tailoring specific offerings to their most valuable clients while focusing on fulfilling emergent consumer demands.[35] Although the survey results suggested that the ability to retain customers was both positively and negatively associated with job growth, the case study results provided additional, if limited, guidance. At least 5 case study firms identified customer retention as critical to firm success, although it also seemed that the recession similarly impacted a businesses' customers. For instance, one owner reported that his existing customers kept him in business during the recession, yet he also identified the critical need to bring in new customers. In addition, two others suggested that a stable customer base had made it possible to minimize staff turnover during the period of volatility. This might be true, however, when all of the available data is viewed in aggregate, a more complex picture emerges. In fact, the more resilient among these firms sought to better serve existing customers by developing new or better products or services, rather than primarily relying on the loyalty of these customers.

Depending on the industry, the ability to retain customers is important to the health of a small employer firm.[36] At a minimum, these firms need to be able to determine which customers are most valuable. Yet this is not the same thing as relying on customer loyalty; firm owners who believe that customers will remain loyal to them will almost certainly not fare as well as those owners who actively seek new customers and work to fulfill emerging customer demands. A printer services firm provides a clear example of this distinction.[37] The company focused on selling printers to area businesses until office equipment sales plummeted during the recession. Facing this dramatic shift in the business climate, the owner decided to refocus his business and include printer repair services. This shift allowed him to retain his existing customers, but he did so because he was able to address their emergent needs, and, in the process, just deepen his clients' commitment to his business. In other words, adaptability—and not merely customer loyalty per se—allowed that firm to survive and grow in a down market.

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34 Note that, among case study firms, the ability to "respond to a changing business environment" was also negatively associated with resiliency. The authors suggest that reflects the profound challenges that firm owners face and the anxiety with which they approach strategic shifts, regardless of their capacity to manage through this volatility.

35 Based on the authors' conversations with Peter Russo.

36 Among contract-based businesses, a firm owner's ability to secure contracts can be interpreted in terms of that firm's ability to retain customers.

37 This business is identified as SB20 in Table 21 in the Appendix.

Pivoting from the Core to Expand into Adjacent Markets[38]

Case Study Firm at a Glance
Industry: Retail trade – furniture **Location: Dallas, Texas**
Years as business owner: 15
Number of full time employees (FTEs) in 2009: 7.5
Number of FTEs added in 2010: 12.5
Number of FTEs added in 2011: .5
Outperforming city/industry, in 2010: 169.29%
Average revenue:[a] $2.5 - 5 million
Reported increase in revenue (in 2010): 17%
New financing since 2008: N/A

A furniture business in Dallas, Texas demonstrates how the accurate assessment of firm strengths and emergent opportunities contributes to small business resiliency. The owner took over his grandfather's Dallas-based used-furniture business in 1997 and transformed the company into one focused on a "rooms-to-go" model that offers a range of new furniture to outfit a room.[b] The effort appears to have paid off. The nearly 50-year-old firm performed nearly 170 percent better than companies in the same city and industry, based on 2010 employee figures. The owner reported that, since 2009, the firm has added 13 full time employees to its workforce. The owner says that he has exceeded all of his goals and plans over the last 10 years. The company's revenue was up a reported 17 percent in 2011.

This owner's ability to grow the company despite the recession can be attributed to a number of leadership skills, among them the ability to closely track firm indicators and then use this insight to help determine the company's key strengths. The owner reports that it is critical to look at financials daily, monitoring cash flow and inventory. Because there is an estimated $1 million in furniture inventory (debt stock) that is difficult to minimize, the owner says that he works hard to reduce costs and improve his margins in other areas as well.

The owner has used these indicators to develop and then maintain his niche and competitive advantage. He reports that his store is located in an area of the city considered to be in decline so a lot of the 'big box' companies are moving out. According to the owner, "I'm staying in and helping to build it (the area) back up." This knowledge has also helped him specialize, catering to a clientele that might have credit issues but is interested in purchasing new furniture at reasonable prices.

The owner identified two persistent challenges to his business. The first is access to capital. Because he previously was unable to secure traditional loans, the owner now works with a local private investor. A second long-term challenge has been managing increasing customer demands. The owner notes that "customers want their merchandise immediately but we can't have all products available in our warehouses all the time." The owner also reports that he's working to get the warehouse closer to the business so that they will be able to do same-day delivery, or delivery within two or three days. Otherwise, he says, "I'm going to lose customers."

Despite these challenges, these techniques appear to have paid off for this owner, positioning him to take advantage of emergent opportunities. In the past decade, he has expanded his furniture store several times, and is now located in a 42,000 square-foot showroom. He is also preparing to open an office furniture store that is targeted toward the same niche.

38 a) Based on publicly available Manta data.
b) This company is identified as CS1 in Table 6. More information is also available in Table 21 in the Appendix.

Capability #3: Resilient small employer firms plan effectively

A third capability that appears important to organizational resiliency is a company's ability to translate its strengths and emergent business opportunities into actionable plans that demonstrate how a business will add value.[39] This is related to a company's ability to identify numerous ways to respond to dramatic change and the accompanying decline in the usefulness of existing strategies (Hamel and Välikangas, 2003). These plans are also critical because they must allow the business to divert the necessary resources to support these new funding priorities. These plans might also help a business to solicit outside capital and other key resources.

Small businesses faced tremendous difficulty securing capital during the recession (National Economic Council, 2011). Likewise, recovery plans often focused on efforts to increase the volume and size of loans among small businesses (National Economic Council, 2011; SBA, 2011). A small employer firm might decide not to seek external sources of capital–relying primarily on existing cash flows–or resort to using personal loans to survive. More commonly perhaps, a business owner might seek a loan or line of credit. One view of those businesses that are unable to secure outside capital is these companies have been unable to make a compelling case that these funds will be used to add value in the business environment. Resilient small firms are able to demonstrate how they would add value, often relying on measurable indicators to assess a firm's strengths relative to the market. Accessing capital and making a compelling case are two key aspects of planning effectively, and will be explored further after an examination of the data supporting this leadership skill is presented.

The data supports this conclusion in several ways. Although the survey results did not associate access to capital with resiliency,[40] the case study data supports existing research that underscores the importance of capital and other key financial resources. Among case study firms, 75 percent (12 businesses) identified access to capital as critical to firm growth. In addition, more than 50 percent of case study owners associated an effective funding pitch with the ability to make strategic alterations. Nearly 40 percent of business owners (six companies) reported that they had made such course corrections. Three companies identified this as critical to the stability and longevity of the enterprise and were actively contemplating taking such a step.

Making a compelling case

A second aspect of effective planning refers to a small firm's ability to make a compelling case for these resources. The initial analysis of the quantitative results revealed both a positive and negative association between making an effective case for additional funding and firm-level job growth. The authors initially posited that it might be critical to craft this strategy in response to particular qualities of a specific firm. However, when viewed in relation to the case study firms and desk research, it appeared more likely that making a compelling case is closely related to a company's ability to respond appropriately to the external environment.

At least 7 case study businesses identified ways that they are making strategic use of key resources–capital as well as commodities, products, and labor–to expand the types of products or services on offer and/or building capacity to take on bigger and/or more complex assignments. Moreover, the ability to demonstrate a well thought out plan means that a firm is more likely to be able to secure additional resources (Porter, 1996; Reeves and Deimler, 2011).

Another aspect of making a compelling case refers to the degree that a firm relies on established processes, particularly during periods of volatility. According to Karl E. Weick who studies organizational behavior, "when people are put under pressure, they regress to their most habituated ways of responding" (2007). In other words, the rules that might make a company appear less flexible and creative might help guide it during periods of uncertainty because it is able to focus on one or two fixes in order to keep going (Coutu, 2002).

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39 This insight is based in large part on authors' conversations with Peter Russo.

40 Recall that the survey data used in this study was collected by Interise, an organization primarily focused on practical interventions for small business owners, and measuring the efficacy of the programs it offers to these firms. Because research overwhelmingly suggests that access to capital is a critical component of firm stability and growth, this result suggests that the survey design needs to be improved in order to increase the accuracy of the data collected.

Planning Effectively[41]

Case Study Firm at a Glance
Industry: Security services **Location: Philadelphia, Pennsylvania**
Years as business owner: 7
Number of full time employees (FTEs) in 2009: 70
Number of FTEs added in 2010: 105.5
Number of FTEs added in 2011: 49.5
Outperforming city/industry, in 2010: 137.19%
Average revenue:[a] $2.5 - 5 million
Reported increase in revenue (in 2010): N/A
New financing since 2008: Increased line of credit from $50,000 to $200,00 in 2009. Secured second line of credit for $100,000 in 2011.

A Philadelphia-based security services business provides a useful example of a firm's ability to effectively plan.[b] Security services fared better than most during the recession. This firm operated nearly 140 percent better than a growing industry. In fact, the owner reports he has been able to more than triple his staff size in just two years. As of 2011, he employed about 225 people, of whom 80 percent are full time.

This minority-owned firm is an example of successful planning for several reasons. The owner reports using financial indicators to closely manage the firm, a core competency of firm success. In addition, he has been able to secure and retain access to key resources. Although the owner says that one of the biggest hurtles continues to be credit, he has been able to secure access to credit over the past few years. For instance, the owner reported that he was able to increase his line of credit in 2009 from $50,000 to $200,000, personally securing the line with a $200,000 Certificate of Deposit. In the fall 2011, he was in the process of increasing the line of credit by another $100,000.

The firm's contract employees are another a key resource that the business has actively worked to retain. Because the security services workforce can be transient, the owner reports that he works to ensure that his employees continue to work for him. He encourages employee loyalty by paying his employees weekly, and depositing their funds directly into employee bank accounts.

The firm's ability to plan effectively is also evident through its strategic growth plan. The company's business model is based on strategic partnerships with large security services firms that are required to sub-contract with minority-owned businesses. The firm is well placed to serve as the sub-contractor, and the owner reports that he has been able to secure contracts in other markets. Since the firm opened in 2005, it has expanded into a number of mid-Atlantic states. The owner is currently looking to expand into other markets, and is most focused on acquiring rival firms. In the meantime, the owner notes that he has been very careful about the kinds of business he agrees to take on. For example, he has learned that the inherent risk and liability of retail and construction make them poor choices for his company.

Accessing capital

A firm owner's ability to make a compelling case for accessing capital is one critical aspect of effective planning. The case study results revealed a strong association between access to capital and firm success. The owners of more than 30 percent of case study firms identified the ability to access capital as an urgent business challenge, and one that had become markedly difficult in the current economic climate. Moreover, less than 20 percent of case study firms (three businesses) reported securing a bank loan in the past 36 months, although at least 25 percent of case study businesses (4 companies) had attempted, but failed, to secure a loan. These figures underscore how challenging the lending environment became for small firms. Even so, the "by any means necessary" attitude of the most resilient firms suggests that these firms find key resources even when conventional methods fail.

41 a) Based on publicly available Manta data.
b) This case study firm is identified as CS11 in Table 6, and in the Appendix.

Many firm owners spoke about their difficulties accessing capital. In fact, a significant number had sought alternative sources of capital if they were unable (or unwilling) to find financial support using conventional methods. Five case study owners reported that they only use working capital.[42] Of these, several reported that they were trying to grow the company, but only as quickly as possible using working capital. The owners of two companies reported that they relied on venture capital to grow the business.[43] Another four firm owners had opted to get a personal loan from family and friends, or to use personal assets. The owner of a furniture store reports that he had stopped trying to secure a loan through traditional avenues years ago.[44] He now works with a private investor to secure the loans he needs to expand his business. In other words, this owner has found other ways of accessing capital, a leadership characteristic that appears tied to resilient firms.

The Challenge of Making a Compelling Case[45]

Case Study Firm at a Glance
Industry: Manufacturing **Location: Boston, Massachusetts**
Years as business owner: 10
Number of full time employees (FTEs) in 2009: 13.25
Number of FTEs added in 2010: -2.25
Number of FTEs added in 2011: -1
Outperforming city/industry, in 2010: N/A
Average revenue:[a] $0.5-$1 million
Reported increase in revenue: N/A
Financing, since 2008: $300,000 in personal loans

The challenges of making a compelling case in order to secure outside funding present very real limitations for firm owners. For the owner of a banner and stitching company, the recession revealed a number of weaknesses in the business, and dramatically impacted the company's profitability and ability to plan for the future.[b] Business dropped precipitously from late 2008 through 2009. The owner reported that the firm posted a substantial loss in 2009. As of 2011, business still had not returned to pre-recession levels. In 2009, the company reported 13.25 full time employees; by 2011, that number had dropped to 10.

Although incoming business has since stabilized, the company has not returned to pre-recession levels. It has been unable to secure a loan or line of credit despite requests from a number of lending institutions, forcing the owner to personally loan $300,000 to the business to keep it afloat and to able to hold onto the highly skilled–and difficult to replace–stitching staff. This cash infusion has kept the doors open and allowed the firm to build a reserve account to support the company during the slow winter months. But, the company's long-term future remains unclear. In the fall 2011 interview, the owner reported that the loan hadn't been enough for the company to build out its sales group, a critical strategic management concern.

Consider, for instance, the owner of a Des Moines, Iowa restaurant.[46] The owner reported that he survived a flood-related economic downturn in the 2000s by reducing his operating costs. He did this by renegotiating with his vendors and then overhauling his restaurant's entire food and service delivery process. The owner says that this helped him reduce, and then more closely manage, his costs as well as work more effectively with his staff. Because he maintained

42 Although this study is primarily focused on second-stage companies that are aggressively focused on growth, at least two case study firms are likely lifestyle businesses whose owners are primarily interested in the stability of the firm but otherwise not interested in growth. Both of these firm owners reported relying only on working capital, a scenario that does not directly depend upon making an effective case for funding. Of course, that firm owner will still need to be able to effectively market and sell any new business initiative.

43 These firms are identified as CS8 and CS13 in the Appendix. According to Manta, they are classified as having approximately $3 million and $5 million in revenues, respectively.

44 This firm is identified as CS1 in Table 6, and in the Appendix. It is also explored on pages 30-31.

45 a) Based on publicly available Manta data.
b) This case study firm is identified as CS16 in the qualitative sections of the Appendix.

46 This firm is identified as CS6 in Table 6 and in the Appendix.

this managerial style even after the regional downturn, the owner believes that he was better prepared to handle the national recession. That preparation paid off in other ways too, by providing him the space to take some risks to maintain business profitability in an uncertain economic climate. For instance, when the normal lunchtime crowd dropped off, he developed strategies to bring in those "value-conscious customers" on the weekends, adding live entertainment and re-working the menu. Currently, the restaurant has about 30 full time and 20 part-time employees, although that number has fluctuated over the past few years. Even so, the owner has been able to maintain enough profitability to open another restaurant.

Capability #4: Resilient firms demonstrate creativity under pressure

This fourth capability refers to a firm's ability to try new ideas that respond to the unexpected opportunities brought on by market volatility instead of relying on normal business routines or established strategic growth plans (Gibson and Tarrant, 2010). This also refers to an "entrepreneurial mindset" in which the firm is willing to move outside of its comfort zone to consider new ideas and emergent trends.

This capability is distinct from the inward-facing formal strategic planning techniques designed for large-size firms, and focuses instead on an approach that allows the owner to see unexpected opportunities and ways to improve internal efficiency. At least 8 of the case study firms appear to bring such an experimental attitude to their businesses. Furthermore, the majority of the 15 small employers that spoke about the critical importance of a strategic growth plan have needed to change their initial plan, either scaling back intended growth or making larger shifts. In other words, they've consistently fine-tuned their business plans in response to market changes.

For instance, when the owner of a welding and fabrication company in Detroit needed to better market his business to area businesses, he decided to try an unconventional approach that eschews traditional marketing efforts.[47] Because his clientele is part of a closely-knit community in the city, he opted to make a greater effort to contribute to the community. The owner opted to help sponsor area parks, providing the labor and the materials to improve these public spaces. In return, his company's name is prominently displayed on park plaques. Through these efforts, the owner has increased his visibility in the community but also built up brand recognition among the businesses and potential clients that he needs to reach.

This mindset is also critically important for firms that are growth-oriented. At least 50 percent of the firms examined in the case study analysis are in the midst of the critical "second-stage" (Edward Lowe Foundation, 2011).[48] Second stage companies have moved beyond start-up phase and must cope with the challenges of growth, regardless of economic climate. These challenges include: refining core strategy, adapting to industry changes, expanding markets, building a management team, and embracing new leadership roles.[49] For instance, the owner of a janitorial supply firm borrowed retail strategies to overhaul a contract business.[50] Likewise, the owner of a healthcare intermediary responded to recession-related financial pressures by offering a price guarantee in order to engage a new kind of client.[51] This move was unorthodox in the industry but it likely helped the firm thrive despite the recession.

Capability #5: Resilient firms are adaptable

Adaptability is the final capability that this study posits is critical for small employer firm resiliency during challenging economic periods. It refers to a firm owner's commitment to improvement, and ability to position the firm so that it is able to quickly pivot to seize unexpected opportunities and thus beat out the competition. In an era when market volatility has become the 'new normal,' this capability primes companies to anticipate market shifts rather than adopt a reactive posture and wait for change to become inevitable (Hamel and Välikangas, 2003). Instead, more resilient firms demonstrate an adaptive stance, an outward-facing framework that a company's management team is constantly fine-tuning in response to the environment (Reeves and Deimler, 2011). This key capability sets more resilient firms apart from businesses that might succeed in routine environments but struggle in challenging economic conditions. This also suggests that strategic advantage is not merely a matter of producing or delivering something that differentiates a business from its competitors, or even demonstrating a commitment to constant improvement, but rather demonstrating an ability to effectively optimize a business's competitive advantage in relation to the emergent market (Reeves and Deimler, 2011; Zook and Allen, 2010).

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47 This firm is identified as CS2 in Table 6. More information about the company is also available in the Appendix.

48 The Edward Lowe Foundation defines second-stage companies as that have grown beyond startup stage but are not yet mature companies, possessing "enough employees to exceed the comfortable control span of one owner/CEO and benefit from adding professional managers, but they may not have a full-scale professional management team." In addition, they generally have 10 to 100 employees and/or annual revenue ranging between $750,000 and $50 million.

49 These are many of the challenges that small firms are taught to better manage through the Interise curriculum.

50 This firm is identified as CS10 and is described on pages 25-26.

51 This firm is identified as CS7 and is described on pages 37-38.

This capability requires discipline, and at least some mastery of the four previously described skills. In fact, it is unlikely that a firm owner would be able to effectively demonstrate any of the capabilities without at least some competency in the others. Competent use of measurable indicators is a core skill that a firm owner must possess to be able to successfully run a company in any economic climate. During deteriorating economic conditions, when profit margins tend to shrink and competition becomes more intense, regular use of these indicators become even more critical.

The competent use of these indicators is also required for business owner to be able to accurately gauge and respond to signals of change. These engage a second set of capabilities that Reeves and Deimler describe as "organizational capabilities that foster rapid adaptation" and refer to a company's ability to accurately assess firm strengths and the external environment as well as its ability to plan effectively. These are the capacities that Woods and Wreathall refer to as second order adaptations, which often occur when the demands placed on a business exceed the limit of that company's existing capacities. For instance, in order for a firm owner to (re)evaluate his/her business model or place in the value chain, an owner needs to be able to closely measure firm performance. Likewise, it stands to reason that both the effective use of these indicators and the correct assessment of firm opportunities are required in order to plan and implement effectively. Finally, creativity under pressure works across these skills, referring to a firm owner's willingness to adopt and maintain an "entrepreneurial mindset", even when business is good.

The data also support these interpretations. The case study results underscore the importance of strategic positioning and the need to be able to reposition a firm as conditions change. In addition, the survey results reveal a positive association between "confidence in overall leadership" and the ability to maintain or grow the workforce during economic uncertainty. More than 90 percent of case study firms (15 companies) identified this managerial strength as critical to firm growth. Not all of these case study employers can be described as engaging in adaptive strategies. For instance, one small employer has actively sought new client opportunities, but says that the company's most crucial strategic strength is its status as a native-owned firm. This firm appears to have a solid employee management and sales approach but it is not clear that it exemplifies the strategic thinking and adaptability explored in this study.

Yet at least eight of the fifteen entrepreneurs that identified the importance of strategic positioning demonstrated the willingness and capacity to adapt to market shifts; they have done so in distinct ways. For instance, six firms identified partnerships as a technique for managing through the challenging economic conditions. Two small employers reported that they had responded to market shifts by further specializing to exploit business niches. One opted to innovate by pursuing contracts for highly specialized work,[52] while the owner of a pest control business invested in dogs trained to identify bug infestations.[53] Another owner identified the need to diversify service or product offerings to adapt to customer demand by expanding services to recycle more kinds of materials.

Likewise, nearly 40 percent of case study firms (six companies) noted that responding to a changing business environment presented a key strategic challenge to firm success. In particular, these owners spoke about the difficulties of having to take on new types of work and of needing to move into new regions or sectors. Yet less than half of these firms appeared to have acted on this knowledge for whatever reason. Furthermore, the survey results suggest that less resilient firms rely too heavily on their ability to secure government contracts and to retain existing customers. At least during periods of economic uncertainty, reliance on these managerial techniques appeared to inspire more complacency than an entrepreneur's mindset.

Finally, two case studies demonstrate adaptability in practice, underscoring both a competency in the first three leadership capabilities as well as commitment to improvement required to dynamically revise strategy. The owner of one case study firm focused on revising the firm's position in the value chain, while another focused on revising the firm's position in the market.

Revising a firm's position in the market

One critical skill that enables adaptation is the ability to identify and effectively act on "signals of change." This can allow a small employer to revise the firm's position in the market. This is the case with a Portland, Oregon-based electrical contracting and construction company that participated in the case study process.[54]

52 This firm is identified as CS3 and is described in greater detail below.

53 This firm is identified as CS14 in Table 6 and in the Appendix.

54 This firm is identified as CS3 in Table 6 and in the Appendix.

Revising a Firm's Position in the Market[55]

Case Study Firm at a Glance
Industry: Electrical contracting and construction Location: Portland, Oregon
Years as business owner: 13
Number of full time employees (FTEs) in 2009: 47
Number of FTEs added in 2010: 10
Number of FTEs added in 2011: -3
Outperforming city/industry, in 2010: 35.18%
Estimated revenue:[a] $2.5 - 5 million
Reported increase in revenue: N/A
New financing since 2008: N/A

A Portland, Oregon-based electrical contracting and construction company presents one example of a company demonstrating creativity and adaptability to become more resilient. The owner reports that the recession brought significant challenges to the company. As in many places around the country, the recession brought an enormous amount of market volatility to the construction sector. The firm lost a number of its existing contracts, and found it significantly more difficult to bring in new business. The owner notes that competition for contracts has grown fierce as larger firms have gone after smaller contracts; 50 percent of the firm's business is contracts-based. The recession has also left potential clients nervous about working with new firms, the owner says, a reality that has left him with a greater appreciation for the firm's remaining customer base. In addition, the lagging business has meant that the firm stopped replacing any full time employees lost to attrition. The owner says that these challenges pressured him and his partner to reconsider the firm's strategic growth plan as well as its business plan, developing alternative models to survive the unpredictable economic climate.

The owner reports that the recession brought an enormous amount of market volatility, making strategic investments in the firm almost impossible. He had planned to hire somebody to perform reverse cost estimates to manage profit margins as efficiently as possible, but the recession has made this hire unrealistic in the near future. In the meantime, the owner has also tried to control his operating costs and maximize his financial resources. For instance, the owner has tried to limit the firm's vulnerability to fluctuations in the commodities market by identifying the hard costs at the start of each project. He is now able to purchase all of his estimated steel and copper piping needs at the start of the year, when prices are usually lowest. Previously, he purchased raw materials as needed, even though the prices dramatically increase during the peak summer season. In short, the recession forced him to plan his expenses, and save money in the process.

The firm owners have also demonstrated a commitment to adaptation and the capacity to deliver on that commitment by working to maximize the firm's key differentials while taking greater advantage of emergent opportunities. The owner reports that he and his partner have expanded the company's service area, bidding on projects across the state rather than just in the Portland metro area. They have also moved to make the firm more specialized by bidding on highly technical hospital-based projects. Although these projects increase the firm's risk of liability, the company has sought them because it is one of the few area firms that possess these technical skills, so it is better able to differentiate itself from the competition.

In a bid to become more competitive, the owners have also co-founded a joint venture. They expect it will prove advantageous when bidding for the projects that are awarded to bigger firms. The business will now be able to bid for $50 million projects, significantly larger than the $5 million contracts the firm usually secures.

55 a) Collected from publicly available Manta data.

Revising a firm's position in the value chain

Another aspect of adaptability is the ability to function within and across companies as part of a larger system (Reeves and Deimler, 2010). Likewise, Lengnick-Hall and Beck argue for an understanding of resilience capacity in which organizations exhibit 'continually changeable behavior' which prepares them to quickly react to unforeseen changes (2005, quoting Stacy, 1995). One case study firm demonstrates such a capacity, which gave the business the ability to quickly reposition itself in the value chain when the economic conditions suddenly changed.[56]

Adaptability is a powerful leadership quality precisely because it reveals a firm owner's dedication to excellence–as evidenced through a commitment to the first three capabilities–and a dedication to constant improvement and a willingness to make larger changes as necessary. Case study results suggest that this might be articulated in terms of strategic challenges. Nearly 40 percent (6 companies) of the owners of case study businesses identified responding to a changing environment as a critical impediment to firm success. For instance, a co-owner of the healthcare intermediary spoke about his firm's upcoming challenges. This firm has been a pioneer in its field and has already proven capable of dynamic strategic shifts. However, retaining a competitive advantage requires constant course correction. The second stage firm faces the combined challenges of managing growth and outpacing the expanding number of competitors in an increasingly crowded field. This company co-owner says that the management team is considering whether the firm must once again revise its business model and begin to focus on mergers and acquisitions.

Adaptation can also present limitations. A firm owner's willingness to exercise organizational agility in order to stay competitive in an unpredictable or even hostile environment might not be appropriate for every company, or even every industry. Nor is this kind of responsiveness alone necessarily enough for firms to survive dramatic market shifts. Yet to the degree that adaptation reflects a commitment to continuous improvement, adaptive capabilities can have dramatic effects on firms, competition, and economic environments. Understanding exactly how this works will need to be left for further research.

56 This firm identified as CS7 in Table 6, and in the Appendix.

Section IV. Conclusions and Next Steps

This study endeavors to better understand how certain small employer firms managed to maintain or grow their workforce during a volatile market. Based on the data gathered, this research proposes a number of capabilities of resilient firms, and offers a framework to understand the organizational gap between more and less resilient companies. These are: (1) the effective use of measurable indicators, (2) the ability to correctly assess firm strengths and demonstrate market awareness, (3) the ability to plan effectively, (4) creativity under pressure and (5) adaptability, referring to a firm's capacity to dynamically revise its strategic positioning in response to market shifts. This study also suggests that these organizational capabilities are interrelated, namely that it would be difficult to demonstrate adaptability without some mastery of the other capacities. Moreover, because resiliency is fluid, fluctuating over time and circumstance, it also stands to reason that firms would possess varying abilities to effectively perform the capabilities proposed in this study.

These capabilities are not universal recipe for small business success---they are not necessarily sufficient for companies operating in a stable business climate and businesses must still rely on core strategy.[57] In addition, these results are preliminary. This research has focused primarily on one aspect of resiliency, namely the leadership capabilities that contribute to company success in volatile conditions. Organizational resiliency is also dependent on the external business environment and additional components. Gibson and Tarrant (2010) refer to these additional components as a firm's resources and infrastructures as well as its internal processes, while Lengnick-Hall and Beck have focused on behavioral and contextual components of resilience, to refer to behaviors and organizational characteristics that drive a firm forward and a firm's social positioning and network, respectively.[58] Additional research would provide the opportunity to undertake a more comprehensive examination of resiliency among small employer firms. It could also lay the groundwork for practical interventions to better support small businesses.

As economic volatility is increasingly becoming the norm, small firms must become more adept with managing through this uncertainty. Moreover, because resiliency is fluid, fluctuating over time and circumstance, companies must be able to adapt to significant change as well as smaller changes. Similarly, practical interventions are also of critical interest for those policy makers who are primarily focused on the relationships between job growth, economic recovery, and access to capital and other financial support for small firms. Recall that, from 2008 through 2010, many small firms were unable to secure capital from traditional lending sources, because of tightened lending standards and record decline in the volume of credit.

This study supports research suggesting that the leadership capabilities and internal capacities of small firms are as critical to small firm success as access to capital, although the precise relationship between resiliency and access to key resources remains unclear. For instance, what is the relationship between adaptability, capital, and firm-level job growth? During the recent recession, did resilient small firms tend to pursue growth opportunities that required less capital or did they resolve the shortfall in another manner? Finally, what is the relationship, if any, between cash reserves and small business owners' willingness to adopt innovative strategies to survive uncertainty and upheaval in the market? Even as the lending situation has improved, small firms have continued to face economic uncertainty. How do reduced constraints on capital impact a resilient firm's demonstrated commitment to learning and adaptation?

These are valid questions that underscore the larger questions surrounding the practical application of this research, namely how the capabilities outlined in this study are not only teachable but also "learnable". These questions are not only critical to Interise and its mission, but they are also vital to better supporting small businesses navigating ongoing market volatility.

One first step to develop these capabilities into learning opportunities is to better understand the gap between more resilient firms and the less resilient ones, and to gain insights into the decision-making process of companies working to improve resiliency. For instance, Lengnick-Hall and Beck have pointed to the need for a nuanced perspective on how a firm responds to changeable or volatile business climate. Namely, they identify important distinctions regarding the stability of the external conditions, distinguishing between how a firm might react to changing from one state of equilibrium to another, from "environmental jolts," when a situation changes dramatically but temporarily, and from

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57 For a general examination of strategy and its importance for business success, see Michael Porter's "What is Strategy" article, which appeared in the *Harvard Business Review* in 1996.

58 The final component of Lengnick-Hall and Beck's resilience capacity model refers to cognitive resilience, which refers to the "conceptual orientation that enables an organization to notice, interpret, analyze, and formulate responses in ways that go beyond simply surviving an ordeal" (14).

ongoing shifts, where continuous change becomes the norm. They suggest that a firm might opt for "robust transformation" during periods of change and instability, but adapting to the circumstances might prove more effective when transitioning from one stable environment to another (2005, 748). This study focused on the 2007-2009 recession, and assumed that the downturn affected each industry and firm in more or less the same manner. However, it is more likely that the recession–and the continuing market volatility–resulted in distinct environmental situations that demanded distinct responses based on a firm's organizational capabilities and intended outcomes.

The research presented here generally examined companies that were performing as well as or better than the city and industry, in part because of the types of business owners willing to participate. At the same time, more can be learned from the less resilient firms, namely those who were significantly impacted by the 2007-2009 recession. For instance, the grouping framework created for this study classifies fully 40 percent of firms from the class of 2010 as "less resilient", as compared to 31 percent of firms from the 2009 class.[59] Additional research would make it possible to better understand what prevented some small employer firms from expanding their workforce. It would also provide insights into the ways that a firm might become more or less resilient depending upon the context. For instance, it appears that some business owners knew what they needed to do but were unable to implement that aspect of strategy for whatever reason. Other firm owners, by contrast, seemed less certain of how to respond to the additional challenges of reduced margins and customer demand.

Another step to developing the practical relevance of this research is to better understand the kinds of business environments that help support small business resiliency. Companies are impacted by the business climate in which they operate. This includes regulatory and other supports as well as the available workforce and mentorship opportunities. Fitting into the larger environment in which a business operates might also be thought of as a critical aspect of resiliency. In their analysis of competitive advantage, Reeves and Deimler suggest that adaptable organizations increasingly must effectively operate as part of a larger dynamic system, "better characterized as competing webs or ecosystems of codependent companies than as a handful of competitors producing similar goods and services and working on a stable, distant, and transactional basis with their suppliers and customers" (2011).

Such research might be accomplished in several ways. First, it might consist of a follow-up survey to the 374 small firms examined in this study. This step would help verify the validity of the research conclusions put forth in this paper. It would also provide critical insights into the areas where the conclusions must be modified or improved. This is particularly important because the existing survey data did not pose any questions about resiliency, nor did it query businesses about the relationship between certain managerial strengths and the ability to navigate extended periods of economic turbulence and uncertainty.

As such, a follow-up survey would provide insights into the value and usefulness of the resiliency framework created for this study (See Table 1). As such, it would provide additional insight into the companies deemed "more resilient" and "less resilient" as well as those businesses that fall someplace in the middle (Groups 3 through 6). Such a survey, ideally accompanied by additional in-depth interviews, which are discussed below, would verify and clarify these research results, which are based on a relatively small sample. Finally, an additional survey would help researchers develop typologies and other forms of analysis to graph the relative relationships between managerial strengths and a firm's ability to maintain or grow its workforce, as well as graph the relative resiliency of the firm themselves.

Second, this additional research might consist of additional case study interviews of firms operating along the resiliency framework devised for this study (See Table 1 on page 11). Of greatest interest are less resilient firms, namely those classified as Groups 7 or 8. In particular, these interviews would make it possible to reveal the distinctions in leadership skills between more resilient firms (classified as Groups 1 and 2) and the less resilient ones, as well as differences between how these two groups conceive of firm challenges.

Third, further research might consist of an in-depth, longitudinal examination of a select number of small firms. These firms would have agreed to share their financial data and participate in follow-up interviews that would be conducted quarterly for at least 12-18 months. Such case study research, particularly if examined alongside the analysis of a follow-up survey, might provide critical insight into the nature of small firm resiliency. In particular, it might provide crucial insight into how the leadership of more resilient companies developed the capabilities outlined in this study. In turn, these techniques might be used to teach the leadership skills used by more resilient companies to those

59 See Table 1 on page 11. These figures refer to businesses classified in groups 7 and 8 in the resiliency framework. More information on this framework can also be found in Table 10 of the Appendix.

firm owners who struggle in periods of uncertainty. Additionally, longitudinal research can provide greater insight into how business owners learn to become more resilient, perhaps as they bounce back from less resilient periods. Likewise, it can more clearly identify the behaviors or weaknesses that are most likely to keep less resilient firms from becoming more capable of withstanding market volatility.

Taken together, these insights could be used to develop the training modules that can pass the critical leadership skills of the most resilient firms onto the less resilient ones. Once this has occurred, a working group comprised of small firm representatives and small business development specialists could be convened to translate the results of these preliminary studies into training components. Then, these training components could be used to help small businesses learn the skills and capabilities required to better manage through uncertainty. These include demonstrating a willingness to borrow successful strategies from different sectors, moving away from fixed strategic growth plan in favor of dynamic strategic planning that is fine-tuned or revised in response to unexpected opportunities, and creating an environment for emergent leadership to flourish. Of course, developing these training components–and then demonstrating their efficacy–would also require evidence-based attention to planning and implementation of such training components.

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APPENDICES

Table 10: Distribution of Firms Across Grouping Framework

A grouping framework was created for the difference in means test so that it would be possible to gauge one small employer firm's job growth performance relative to other small employer firm's performance. This required adding control employment data from the U.S. Census QWI database using NAICS classifications to normalizing a firm's job growth by the job growth experienced in its respective industry and city. Groups 1 and 2 are categorized as "more resilient" and Groups 7 and 8 are categorized as "less resilient."

Group	Change in FTE (%)	City/Industry Change in FTE (%)	Company vs. City/Industry	N
1	Positive	Negative	Company > City/Industry	127
2	Stable	Negative	Company > City/Industry	19
3	Positive	Positive	Company > City/Industry	81
4	Positive	Positive	Company < City/Industry	10
5	Stable	Positive	Company < City/Industry	17
6	Negative	Negative	Company > City/Industry	3
7	Negative	Negative	Company < City/Industry	57
8	Negative	Positive	Company < City/Industry	60

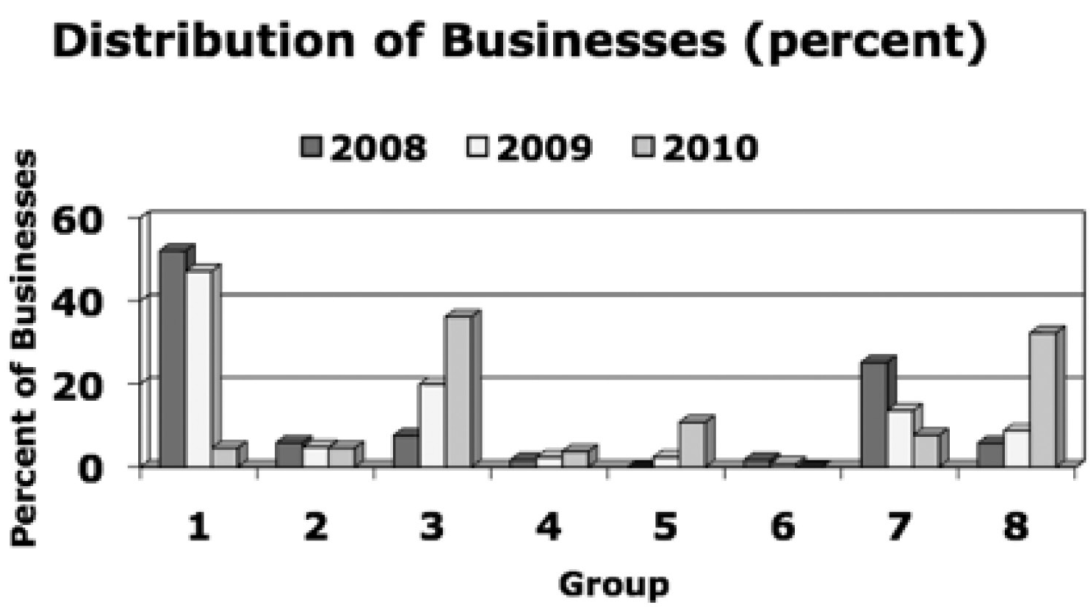
Notes:

Group 1: Firm added employees and outperformed the city/industry, which lost employees
Group 2: Firm maintained employees and outperformed the city/industry, which lost employees
Group 3: Firm added employees and outperformed the city/industry by hiring employees at a higher rate than the city/industry as a whole
Group 4: Firm added employees but underperformed the city/industry by hiring employees at a lower rate than the city/industry as a whole
Group 5: Firm maintained employees but underperformed the city/industry, which added employees
Group 6: Firm lost employees and outperformed the city/industry by losing employees at a lower rate than the city/industry as a whole
Group 7: Firm lost employees and underperformed the city/industry by losing employees at a higher rate than the city/industry as a whole
Group 8: Firm lost employees and underperformed the city/industry, which added employees

When the above framework was created, the authors expected that the 374 small employer firms examined in this study would be evenly distributed across this framework. In practice, however, businesses tend to concentrate in Group 1 (N=127), and to a lesser extent, in Groups 3, 7 and 8 (N=81, 57, 60, respectively). This could be partially explained by bias in the data set as it only contains small employer firms whose owners sought out a business-training program. Additionally, when businesses are examined by class year, the businesses from the 2008 class tend to concentrate in Groups 1 and 7 (N=62, 30, respectively) and businesses from 2010 tend to concentrate in Groups 3 and 8 (N=47, 42, respectively). Businesses from class 2009 tend to concentrate in Group 1 (N=59).

While possible explanations for these changes in distribution are subject for further research and discussion, this paper suggests that the shift from a high number of businesses in groups 1 and 7 in 2008 to a high number of businesses in groups 3 and 8 in 2010 is partially explained by the changes in the overall economic climate. As the overall economy began to slowly recover from the 2007-2009 recession, more environments began to experience positive growth. As the table above illustrates, the only difference between groups 1 and 3 is whether the city/industry experiences positive or negative change in employment, likewise for the difference between groups 7 and 8. As such, when economies began to recover in 2009, is it expected that a number of businesses in groups 1 or 7 would shift to groups 3 or 8, respectively. Note: The bar chart reflects businesses grouped by percentage as that allows for a clearer comparison across years with different total numbers of businesses.

Group	2008 Businesses	2009 Businesses	2010 Businesses	Total
1	62 (52.1%)	59 (47.2%)	6 (4.6%)	127 (34.0%)
2	7 (5.9%)	6 (4.8%)	6 (4.6%)	19 (5.1%)
3	9 (7.6%)	25 (20%)	47 (36.2%)	81 (21.7%)
4	2 (1.7%)	3 (2.4%)	5 (3.8%)	10 (2.7%)
5	0 (0.0%)	3 (2.4%)	14 (10.8%)	17 (4.5%)
6	2 (1.7%)	1 (0.8%)	0 (0.0%)	3 (0.8%)
7	30 (25.2%)	17 (13.6%)	10 (7.7%)	57 (15.2%)
8	7 (5.8%)	11 (8.8%)	42 (32.3%)	60 (16.0%)
TOTAL	119	125	130	374



Difference in Means Tests

Tables 5 through 8 present results from a number of difference in means tests conducted on small employer firms from 2008, 2009, and 2010. The sample size is 66, 84, and 124, respectively. These tests were conducted in order to determine if the set of businesses categorized as "More Resilient" (Groups 1 & 2) differ significantly from those categorized as "Less Resilient" (Groups 7 & 8). This framework made it possible to better determine the relationship between resiliency and particular characteristics of strategy. Thus, if there is a significant difference between "More Resilient" and "Less Resilient" businesses for a given characteristic then when that difference is positive, that strategy can be said to be positively associated with resiliency. Likewise, if the difference is negative, the strategy can be said to be negatively associated.

This test was performed using traditional statistical methods on 30 strategy variables to test whether the null hypothesis that the strategy of group 1 & 2 did not differ from the strategy of groups 7 & 8. Strategies for each group are the average Likert scale score given to each strategy by all businesses in the respective groups. In statistical terms:

H_0: $\text{Strategy}_{1\&2} - \text{Strategy}_{7\&8} = 0$ H_A: $\text{Strategy}_{1\&2} - \text{Strategy}_{7\&8} \neq 0$

$$t = \frac{(\text{Strategy}_{1\&2} - \text{Strategy}_{7\&8}) - 0}{\text{sqrt}[(S^2_{1\&2} / N_{1\&2}) + (S^2_{7\&8} / N_{7\&8})]}$$

Based on the two-sample t distribution, with degrees of freedom equal to the minimum of (N1&2 -1) and (N7&8-1), this test yields a p-value, the probability of observing the difference observed between the "more resilient" and "less resilient" groups, if the true population means between the two groups are equal.

The t-statistic measures the number of standard deviations away from 0 that a given difference is, while the p-value measures the probability of observing the difference that was observed if the true difference between the two groups was 0. To state in less statistical terms, the higher the t-statistic, and the lower the p-value, the more likely it is that the observed difference is a meaningful difference between more and less resilient businesses, and the less likely it is that the difference found in this study was due to chance.

As such, those readers seeking the immediate implications of these findings should first consider the significance row. Traditionally reported significance levels of 10%, 5% and 1% significance are reported where they are observed. The lower the significance percentage the less likely it is that the observed difference was due to chance. After identifying significant results readers should consider the magnitude and direction of the difference observed. Where the sign is positive, the survey question probing a specific strategy, on average, elicited a greater response on a scale from 1-3 or 1-5 among the "more resilient" businesses than among the "less resilient" businesses. Where the sign is negative, the survey questions probing the strategy elicited a greater response on a scale from 1-3 or 1-5 among the "less resilient" businesses than among the "more resilient" businesses. The magnitude of the difference does not measure whether the difference between the "more resilient" and "less resilient" businesses was significant, but rather how large the difference was between the average value of survey responses (again, on a scale of 1-3 or 1-5) of those businesses categorized as "more resilient" and those categorized as "less resilient". The larger the absolute value of the difference, the greater the difference in the value of responses to questions addressing a given strategy was. In each table, the significance and difference rows are displayed in bold to highlight their importance and simplify reading of the table.

Statistically inclined readers will likely question the application of the difference in means tests in this context. A sample and population have not been specified, and simple random sampling was not conducted. In spite of the lack of these traditional components of a difference in means hypothesis test, the authors stand by the use of the test for two reasons. First, the goals of this study as a whole were not to quantitatively measure the difference in adherence to strategies of a sample in order to expand findings to an overall population, but rather to take a unique, and admittedly biased, data set and analyze it in order to stimulate policy discussion and future research. Second, while survey respondents cannot be considered a random sample of all businesses having taken the Interise curriculum, nor can they be considered a random sample of all small businesses, the businesses examined represent a portion of all businesses that will eventually take the Interise curriculum and respond to surveys, and in that sense are a sample (if not randomly selected). That said, as the research goals were to stimulate discussion and future research, the authors believe that the difference in means hypothesis tests can provide useful insight, despite methodological and statistical limitations.

Table 11: Managerial Strengths as Measured in the 2008 Survey

In this specific set of tests on the 2008 survey, two managerial strengths yield significance, and are thus the take away points for non-technical readers. These strengths are "retaining existing customers" and "marketing." Both are negatively associated with resiliency, indicating that owners of businesses categorized as less resilient expressed greater confidence in keeping existing customers and in marketing than those owners of businesses categorized as "more resilient." As only two managerial strengths appear significant, and both are negatively associated with resiliency, this specific test does not statistically support the argument that the owners of "more resilient" firms exhibited significantly more of any of the managerial strengths than the "less resilient" businesses. The 2008 survey frames these questions in terms of "confidence", asking how confident a firm owner was in using the following managerial strengths on a 3-point Likert scale (i.e., not confident, somewhat confident, very confident).

Sample Restricted by Group & Size	Average	Raising capital	Financial management	Accounting	Business leadership	Overall leadership	Developing & implementing a sales strategy	Describing your business to potential customers & investors	Retaining existing customers	Obtain new customers	Marketing	Applying for government contracts	Managing employees	Is your business following a growth plan 1=Y, 0=N
Avg. or % More Resilient	1.3908	1.7297	1.5385	1.5128	1.2564	1.2051	1.3590	1.1538	1.1026	1.2821	1.3590	1.9231	1.2821	0.9231
StdDev More Resilient	0.2670	0.6078	0.5547	0.6014	0.4424	0.4091	0.4860	0.3655	0.3074	0.4559	0.5374	0.8074	0.4559	0.2700
N More Resilient	39	37	39	39	39	39	39	39	39	39	39	39	39	39
Avg. or % Less Resilient	1.5216	1.8889	1.4444	1.7407	1.4074	1.3703	1.5926	1.2963	1.2963	1.3333	1.6667	1.9630	1.2593	0.8148
StdDev Less Resilient	0.3578	0.6980	0.5774	0.5943	0.5723	0.4921	0.6939	0.6086	0.4653	0.4804	0.6202	0.8077	0.4466	0.3958
N Less Resilient	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Difference	**-0.1308**	**-0.1592**	**0.0940**	**-0.2279**	**-0.1510**	**-0.1652**	**-0.2336**	**-0.1425**	**-0.1937**	**-0.513**	**-0.3077**	**-0.0399**	**0.02279**	**0.1083**
t-Statistic	-1.6136	-0.9507	0.6609	-1.5242	-1.1529	-1.4350	-1.5115	-1.0880	-1.8959	-0.4353	-2.0912	-0.1973	0.2021	1.2360
Degrees of Freedom	26	26	26	26	26	26	26	26	26	26	26	26	26	26
P-Value	0.1187	0.3505	0.5145	0.1395	0.2594	0.1632	0.1427	0.2866	0.0691	0.6669	0.0464	0.8451	0.8414	0.2275
Significance									10%		5%			

Table 12: Managerial Strengths as Measured in the 2009 Survey

An analysis of the difference in means tests of 2009 data does not associate any managerial strength with resiliency. In short, there are no statistically significant 'take away' results. As such, an analysis of this data does not help establish a relationship between resiliency and characteristics of strategy. The lack of clear associations, or significant coefficients, suggests either (1) a lack of any true difference between "more resilient" and "less resilient" firms with respect to the queried characteristics of strategy, or (2) insufficient data. Given that significant differences are observed in the difference in means tests using the 2008 and 2010 data, as well as in the regression analysis (below), the authors suggest that the 2009 data was not sufficiently robust to yield significant results in a different in means test.

The questions in the 2009 survey asked the degree to which a firm owner reported the following managerial strengths on a 5-point Likert scale (none, some extent, moderate extent, significant extent, great extent).

Sample Restricted by Group & Size	Average	Use financial data and analysis to manage your business	Know who your most profitable customers are	Effectively market and sell your products & services	Use well-thought out procedures to assess HR needs	Use well-thought out procedures to measure employee performance	Know how to make a case for additional funding	Follow written goals / growth plan
Avg. or % More Resilient	3.6783	4.1176	4.1765	3.7800	3.3529	3.2549	3.4600	3.5882
StdDev More Resilient	0.6031	0.9305	0.7670	0.8640	0.8677	0.9347	1.0539	1.0233
N More Resilient	51	51	51	50	51	51	50	51
Avg. or % Less Resilient	3.7367	4.1875	4.3870	3.6250	3.2500	3.375	3.5625	3.75
StdDev Less Resilient	0.7467	0.8958	0.7606	0.9755	1.1640	1.0701	1.1341	1.1072
N Less Resilient	33	32	31	32	32	32	32	32
Difference	-0.0583	-0.0699	-0.2106	0.1550	0.1029	-0.1201	-0.1025	-0.1618
t-Statistic	-0.3762	-0.3406	-1.2121	0.7334	0.4308	-0.5221	-0.4103	-0.6669
Degrees of Freedom	32	31	30	31	31	31	31	31
P-Value	0.7093	0.7357	0.2349	0.4688	0.6696	0.6053	0.6844	0.5098
Significance								

Table 13: Managerial Strengths as Measured in the 2010 Survey

The test of difference in means on the 2010 data reveals four managerial strengths positively associated with resiliency. These are: (1) the average of all managerial strengths, (2) the use of financial data analysis, (3) the use of well thought out human resource procedures, and (4) the ability to make an effective case for additional funding. The positive association observed with using financial data and analysis supports the results of difference in means test of the 2008 data, and suggests that the ability to manage a firm's financial position is associated with resiliency. Likewise, the significant difference with "knowing how to make an effective case for additional funding" supports existing research connecting the ability to secure capital to resiliency and job growth. Another managerial strength associated with resiliency relates to using "well thought out procedures to assess human resource needs." This supports initial results that resiliency appears to be related to the ability to modify business operations, perhaps through staffing decisions, in response to a shifting business environment. In short, making strategic, long term hires may allow a business to be resilient, however given that the measurement of resiliency in this study is change in jobs, it is difficult to interpret this particular variable with certainty. The 2010 survey asked the extent to which a firm owner reported the following managerial strengths on a 5-point scale: strongly disagree, disagree, neither agree or disagree, agree, strongly agree.

Sample Restricted by Group & Size	Average	I use financial data and analysis to run my business	I know who my most profitable customers are	I effectively market and sell my products & services	I use well thought out HR procedures	I use well thought out procedures to measure EMP performance	I know how to make an effective case for funding	I follow written goals / growth plan
Avg. or % More Resilient	4.0038	4.3280	4.4828	3.7069	3.9298	3.7931	3.9138	3.8621
StdDev More Resilient	0.5627	0.8032	0.84275	0.8985	0.7760	0.7436	0.9603	1.01650
N More Resilient	58	58	58	58	57	58	58	58
Avg. or % Less Resilient	3.7312	4.0307	4.2615	3.5	3.5909	3.5758	3.5303	3.6364
StdDev Less Resilient	0.7240	1.01503	0.9233	0.9647	0.9278	1.0237	1.0110	0.9866
N Less Resilient	66	65	65	66	66	66	66	66
Difference	0.2720	0.29681	0.2212	0.2069	0.3389	0.2173	0.3835	0.2257
t-Statistic	2.3500	1.8072	1.3892	1.2360	2.2058	1.3634	2.1645	1.2508
Degrees of Freedom	57	57	57	57	56	57	57	57
P-Value	0.0223	0.0760	0.1702	0.2215	0.0315	0.1781	0.0346	0.2161
Significance	5%	10%			5%		5%	

Table 14: Significant Positive and Negative Differences Observed Between Firms Categorized

SIGNIFICANT POSITIVE DIFFERENCES				
Strategy	**Year**	**Difference**	**dF**	**Significance Level**
I know how to make an effective case for additional funding [1-5]	2010	0.3835	57	5%
I use well thought out procedures to assess human resource needs [1-5]	2010	0.3389	57	5%
I regularly use financial data and analysis to manage my business [1-5]	2010	0.2968	57	10%
Mean of all strategies in 2010 [1-5]	2010	.2720	57	5%
SIGNIFICANT NEGATIVE DIFFERENCES				
Confidence in marketing [1-3]	2008	-0.0365	26	5%
Confidence in retaining existing customers [1-3]	2008	-.1937	26	10%

This table summarizes the results of difference in means tests on all three years of data. Several of the above significant managerial strengths are found to be associated with resiliency in the opposite direction by the regression analysis below. Those not contradicted by regressions are addressed here.

The importance of the "regular use of financial data and analysis" suggest that the ability to closely monitor the financial position of a firm is associated with resiliency. That "confidence in retaining existing customers" was found to be negatively associated with resiliency is perplexing, but yields several possible explanations. First, there is a potential disconnect between confidence and competence, a firm that is confident in its ability to maintain customers is not necessarily able to do so. Another possible interpretation is that retaining existing customers is not as important in turbulent economic times as adapting services to remain competitive and attract new customers. The quality of data limits conclusive interpretation, and the authors welcome additional potential explanations. Finally, the mean of all strategies is positively associated, but lacks the precision necessary for interpretation.

The above results for 'making an effective case for additional funding', 'using well thought out human resource procedures', and 'confidence in marketing' are contradicted by the regression analysis below. The authors believe that such results found to be significant here, yet significant in the opposite direction below, while perplexing, are none-the-less important. As quantitative analysis does not allow a clear interpretation of these managerial strengths, they were further examined through qualitative case study research.

Table 15: Managerial Strength Variables from the 2008, 2009 and 2010 Surveys

The characteristics of strategy variables are taken from annual surveys conducted at the end of the year indicated. Note that none of the surveys examined asked about "resilience" or made any reference to particular tactics that the owner of a small employer firm might have used to succeed during economic downturns or recessions.

Variable Name:	**Variable Description: [measurement scale]**
Confidence in…	
Raising Capital 2008:	… Raising capital - 2008 [1-3]
Financial Management 2008:	… Financial management - 2008 [1-3]
Accounting 2008:	… Accounting - 2008 [1-3]
Business Leadership 2008:	… Business leadership - 2008 [1-3]
Overall Leadership 2008:	… Overall leadership - 2008 [1-3]
Sales Strategy 2008:	… Developing & implementing sales strategy - 2008 [1-3]
Describing Business to Others 2008:	…Describing your business to potential investors and customers – 2008 [1-3]
Retaining Customers 2008:	… Retaining existing customers - 2008 [1-3]
Obtaining Customers 2008:	… Obtaining new customers - 2008 [1-3]
Marketing 2008:	… Marketing - 2008 [1-3]
Applying for Contracts 2008:	… Applying for government contracts - 2008 [1-3]
Managing Employees 2008:	… Managing employees - 2008 [1-3]
Use of Growth Plan 2008:	Is your business currently following a growth plan? [1=Y, 0=N]
Increase in Revenue 2008:	Increase in revenue from 2007-2008 as % of 2007 revenue [%]
Value Government Contracts 2008:	Value of government contracts as a % of revenue in 2008 (%)
Extent to which business owner…	
Financial Data 2009:	… Regularly uses financial data and analysis to manage business - 2009 [1-5]
Know Profitable Customers 2009:	… Knows who most profitable customers are - 2009 [1-5]
Market and Sell 2009:	… Effectively markets and sells products and services - 2009 [1-5]
Use HR Procedures 2009:	… Uses well-thought out procedures to assess human resource needs - 2009 [1-5]
Use Employee Management Procedures 2009:	… Uses well-thought out procedures to manage employee performance – 2009 [1-5]
Effective Case for Funding 2009:	… Knows how to make an effective case for additional funding - 2009 [1-5]
Goals or Growth Plan 2009:	Follows written goals/growth plan in 2009 [1=Y, 0=N]
Revenue Increase 2009:	Increase in revenue from 2008-2009 as % of 2008 revenue [%]
Value Contracts 2009:	Value of government contracts as a % of revenue in 2009 [%]
Non LOC Funding 2009:	Value of non-Line of credit financing as a % of revenue in 2009 [%]
Line of Credit 2009:	Business owner uses [1] or does not use [0] line of credit - 2009
Extent to which business owner agrees or disagrees with statement	
Financial Data 2010:	I regularly use financial data and analysis to manage my business – 2010 [1-5]
Know Profitable Customers 2010:	I know who my most profitable customers are – 2010 [1-5]
Market and Sell 2010:	I effectively market and sell my products and services - 2010 [1-5]
Use HR Procedures 2010	I use well thought out procedures to assess human resource needs
Use Employee Management Procedures 2010:	I use well thought out procedures to manage employee performance
Effective Case for Funding 2010:	I know how to make an effective case for additional funding
Goals or Growth Plan 2010:	Follows written goals/growth plan - 2010 [1-5]
Revenue Increase 2010:	Increase in revenue from 2009-2010 as % of 2009 revenue [%]
Value Contracts 2010:	Value of government contracts as a % of revenue in 2010 [%]
Non LOC Funding 2010:	Value of non-line of credit financing as a % of revenue in 2010 [%]
Line of Credit 2010:	Business owner uses [1] or does not use [0] line of credit - 2010

Multivariable Linear Regressions

Tables 16 through 19 present results from multivariable regressions on a sample size of 27, 85, and 20 firms for years 2008, 2009, and 2010, respectively. These regressions were conducted in order to first normalize a firm's change in employment across city and industry, and then associate this data with a small firm owner's self-reported managerial strengths. Table 19 presents a summary and explanation of all results, and is perhaps the most accessible presentation of regression results for non-technical audiences. However those wishing to examine table 16-18, should focus their attention on significant coefficients, marked by asterisks. Asterisks indicate significance as follows: *p£.10,**p£.05, ***p£.01 In other words, for results marked *** there is only a 1% chance that the observed result is due to chance.

Within each cell of the regression table, three numbers are presented. They are the un-standardized beta coefficient, followed by the p value, and finally, the standard error. The standard error and p-value relate directly to the significance of the result, which again, for non-technical audiences should be primarily indicated by the asterisks. However, within the marked cells, the first number, the beta coefficient or point estimate, indicates the magnitude and direction of the effect of the corresponding managerial strength.

For example, in Table 16, column IV, *** indicates that the variable 'overall leadership' was found to be statistically significant at the 1% level. In order to understand the direction of that association one examines the beta-coefficient (the first number) in the cell, in this case, 2.126. The fact that this number is positive indicates that the association is positive, or across the whole sample as a respondent's rating of confidence in overall leadership in 2008 increased, so too did employment. For guidance in interpreting the magnitude of this difference please see the explanation accompanying Table 16.

In this analysis the independent variable is the differential between the percentage change in employment for a given businesses and the percentage change in employment in the corresponding industry/city, while the dependent variables are the Likert scale responses to questions addressing characteristics of strategy, or managerial strengths. In addition to this independent variable (differential) and the dependent variable (measurements of managerial strengths), several control variables were also introduced. These variables include changes in revenue, % of revenue obtained through government contracts, value of loans as a percentage of revenue, and the presence or absence of a line of credit.

For each year four regressions were conducted. The first regression used the full sample of all businesses and regressed all managerial strength variables of interest on the outcome variable of interest. The second regression used the full sample of all businesses and regressed all managerial strength variables of interest and controls on the outcome variable of interest. The third regression used the restricted sample (only groups 1 & 2 and 7 & 8 of the above grouping framework) and regressed all managerial strength variables of interest on the outcome variable of interest. The fourth regression used the restricted sample (only groups 1 & 2 and 7 & 8 of the above grouping framework) and regressed all managerial strength variables of interest and control variables on the outcome variable of interest.

Regression equations are as follows:

I: Differential = B1(Raising capital) + B2(financial management) + B3(Accounting) + B4(Business leadership) + B5(Overall Leadership) + B6(Sales Strategy) + B7(Describing Business to Others) + B8(Retaining Customers) + B9(Obtaining Customers) + B10(Marketing) + B11(Applying for Contracts) + B12(Managing Employees) + B13(Use of Growth Plan) +E

II: Differential = B1(Raising capital) + B2(financial management) + B3(Accounting) + B4(Business leadership) + B5(Overall Leadership) + B6(Sales Strategy) + B7(Describing Business to Others) + B8(Retaining Customers) + B9(Obtaining Customers) + B10(Marketing) + B11(Applying for Contracts) + B12(Managing Employees) + B13(Use of Growth Plan) + B14(Increase in Revenue) + B15(Value Government Contracts) + E

III: Differential = B1(Raising capital) + B2(financial management) + B3(Accounting) + B4(Business leadership) + B5(Overall Leadership) + B6(Sales Strategy) + B7(Describing Business to Others) + B8(Retaining Customers) + B9(Obtaining Customers) + B10(Marketing) + B11(Applying for Contracts) + B12(Managing Employees) + B13(Use of Growth Plan) +E

IV: Differential = B1(Raising capital) + B2(financial management) + B3(Accounting) + B4(Business leadership) + B5(Overall Leadership) + B6(Sales Strategy) + B7(Describing Business to Others) + B8(Retaining Customers) + B9(Obtaining Customers) + B10(Marketing) +

B11(Applying for Contracts) + B12(Managing Employees) + B13(Use of Growth Plan) + B14(Increase in Revenue) + B15(Value Government Contracts) + E

V: Differential = B1(Financial Data) + B2(Know Profitable Customers) + B3(Market and Sell) + B4(Use HR procedures) + B5(Use Employee Management Procedures) + B6(Effective Case for Funding) + B7(Goals or Growth Plan) +E

VI: Differential = B1(Financial Data) + B2(Know Profitable Customers) + B3(Market and Sell) + B4(Use HR procedures) + B5(Use Employee Management Procedures) + B6(Effective Case for Funding) + B7(Goals or Growth Plan + B8(Revenue Increase) + B9(Value Contracts) + B10(Non LOC Funding) + B11(Line of Credit) +E

VII: Differential = B1(Financial Data) + B2(Know Profitable Customers) + B3(Market and Sell) + B4(Use HR procedures) + B5(Use Employee Management Procedures) + B6(Effective Case for Funding) + B7(Goals or Growth Plan) +E

VIII: Differential = B1(Financial Data) + B2(Know Profitable Customers) + B3(Market and Sell) + B4(Use HR procedures) + B5(Use Employee Management Procedures) + B6(Effective Case for Funding) + B7(Goals or Growth Plan + B8(Revenue Increase) + B9(Value Contracts) + B10(Non LOC Funding) + B11(Line of Credit) +E

IX: Differential = B1(Financial Data) + B2(Know Profitable Customers) + B3(Market and Sell) + B4(Use HR procedures) + B5(Use Employee Management Procedures) + B6(Effective Case for Funding) + B7(Goals or Growth Plan) +E

X: Differential = B1(Financial Data) + B2(Know Profitable Customers) + B3(Market and Sell) + B4(Use HR procedures) + B5(Use Employee Management Procedures) + B6(Effective Case for Funding) + B7(Goals or Growth Plan + B8(Revenue Increase) + B9(Value Contracts) + B10(Non LOC Funding) + B11(Line of Credit) +E

XI: Differential = B1(Financial Data) + B2(Know Profitable Customers) + B3(Market and Sell) + B4(Use HR procedures) + B5(Use Employee Management Procedures) + B6(Effective Case for Funding) + B7(Goals or Growth Plan) +E

XII: Differential = B1(Financial Data) + B2(Know Profitable Customers) + B3(Market and Sell) + B4(Use HR procedures) + B5(Use Employee Management Procedures) + B6(Effective Case for Funding) + B7(Goals or Growth Plan + B8(Revenue Increase) + B9(Value Contracts) + B10(Non LOC Funding) + B11(Line of Credit) +E

Table 16: Association Between Managerial Strengths and Changes in Employment: 2008

Regression	I	II	III	IV
Change in Employment Over Time	Differential	Differential	Differential	Differential
Sample	All Businesses	All Businesses	Restricted by Group and Size	Restricted by Group and Size
Independent Variables (Managerial Strengths)				
Raising Capital 2008	-.1558 .517 (.2392)	.3445 .417 (.4142)	-.0848 .805 (.3418)	.6973 .165 (.4716)
Financial Management 2008	-.1300 .656 (.2913)	.4869 .328 (.4839)	-.4669 .255 (.4068)	.1246 .814 (.5187)
Accounting 2008	.1677 .491 (.2425)	.2526 .328 (.4839)	.2265 .502 (.3358)	.1548 .713 (.4110)
Business Leadership 2008	-.3022 .392 (.3510)	-.8826 .145 (.5795)	-.4021 .383 (.4580)	-.6223 .259 (.5247)
Overall Leadership 2008	.0091 .984 (.4509)	1.5824 .028** (.6614)	.5249 .375 (.5876)	2.126 .009*** (.6847)
Sales Strategy 2008	-.2589 .379 (.2927)	-1.274 .051* (.6100)	-.5258 .177 (.3850)	-1.589 .029** (.6391)
Describing Business to Others 2008	.1819 .610 (.3554)	-.2664 .774 (.9138)	.1861 .703 (.4859)	-.0719 .933 (.8434)
Retaining Customers 2008	.2338 .519 (.3614)	.0528 .916 (.4923)	.4156 .378 (.4686)	.6710 .214 (.5115)
Obtaining Customers 2008	.2686 .377 (.3024)	.4610 .371 (.5022)	.1418 .709 (.3785)	-.3257 .546 (.5239)
Marketing 2008	-.1265 .641 (.2706)	.3434 .387 (.3870)	-.0629 .856 (.3434)	.5350 .169 (.3653)
Applying for Contracts 2008	-.1363 .427 (.1708)	-.5350 .058* (.2743)	-.1331 .545 (.2190)	-.5464 .052* .2531
Managing Employees 2008	-.0457 .877 (.2935)	-.4718 .186 (.3428)	-.230 .527 (.3609)	-.5130 .176 (.3570)
Use of Growth Plan 2008	.0903 .851 (.4781)	.3254 .905 (2.677)	-.2530 .746 (.7774)	Dropped due to collinearity
Financial Variables				
Increase in Revenue 2008		.3008 .304 (.2839)		.2488 .352 (.2569)
Value Government Contracts 2008		2.175 .000*** (.2606)		1.995 .000*** (.2656)
Summary Statistics				
SER (Root MSE)	1.2892	0.7827	1.4048	.6966
R^2	0.0688	0.8694	0.1091	.9257
N	107	34	80	27
Observations deleted due to outliers		1		1

Note: Unstandardized coefficients; P-value below; std. error in parenthesis, labeled for significance, p£.10,**p£.05, ***p£.01

Table 17: Association Between Managerial Strengths and Changes in Employment: 2009

Regression	**V**	**VI**	**VII**	**VIII**
Change in Employment Over Time	Differential	Differential	Differential	Differential
Sample	All Businesses	All Businesses	Restricted by Group and Size	Restricted by Group and Size
Independent Variables (Managerial Strengths)				
Financial Data 2009	-.1466 .229 (.1213)	-.2629 .109 (.1621)	-.1222 .370 (.1348)	-.2741 .131 (.1794)
Know Profitable Customers 2009	.1136 .393 (.1324)	.1715 .357 (.1853)	.1837 .232 (.1529)	.2527 .233 (.2100)
Market and Sell 2009	.1236 .275 (.1127)	.2563 .091* (.1500)	.0834 .515 (.1275)	.1634 .340 .1703
Use HR Procedures 2009	.2185 .162 (.1552)	.1563 .446 (.2043)	.2056 .266 (.1841)	.1494 .547 (.2473)
Use Employee Management Procedures 2009	-.1658 .306 (.1615)	-.0808 .713 (.2187)	-.1853 .316 (.1840)	-.1011 .689 .(2514)
Effective Case for Funding 2009	-.0962 .364 (.1056)	-.1194 .422 (.1479)	-.0979 .412 (.1189)	-.1285 .442 (.1661)
Goals or Growth Plan 2009	.0316 .817 (.1366)	.0327 .849 (.1705)	.0827 .590 (.1531)	.1906 .313 (.1877)
Financial Variables				
Revenue Increase 2009		-.0120 .593 (.0223)		-.0198 .419 .0244
Value Contracts 2009		.4882 .020** (.2067)		.5027 .032** (.2299)
Non LOC Funding 2009		-.1136 .950 (1.8147)		-.9594 .637 (2.0254)
Line of Credit 2009		.0749 .780 (.2679)		-.1022 .744 (.3118)
Summary Statistics				
SER (Root MSE)	1.189	1.2831	1.236	1.3361
R^2	.036	.1290	.0372	.1450
N	147	104	117	85
Observations deleted due to outliers		2		2

Note: Unstandardized coefficients; P-value below; std. error in parenthesis, labeled for significance,*p£.10,**p£.05, ***p£.01

Table 18: Association Between Managerial Strengths and Changes in Employment: 2010

Regression	IX	X	XI	XII
Change in Employment Over Time	Differential	Differential	Differential	Differential
Sample	All Businesses	All Businesses	Restricted by Group and Size	Restricted by Group and Size
Managerial Strengths				
Financial Data 2010	-.0733 .459 (.0990)	-.5552 .630 (1.1253)	-.1128 .344 (.1189)	-.4230 .751 (1.2889)
Know Profitable Customers 2010	.0628 .556 (.1065)	1.3662 .206 (.9279)	.0831 .535 (.1337)	1.6211 .139 (.9877)
Market and Sell 2010	.1698 .082* (.0974)	1.2361 .206 (.9279)	.1885 .119 (.1203)	1.6249 .263 (1.3485)
Use HR Procedures 2010	.0224 .840 .1108	-2.0243 .209 (1.5316)	.01461 .917 (.1406)	-3.4202 .080* (1.7060)
Use Employee Management Procedures 2010	.0118 .903 (.0961)	1.1147 .403 (1.2881)	.04967 .679 (.1199)	2.5215 .150 (1.5853)
Effective Case for Funding 2010	.0836 .309 (.0821)	-1.4452 .185 (1.0316)	.0516 .598 (.0977)	-2.9568 .054* (1.3128)
Goals or Growth Plan 2010	-.1147 .208 (.0909)	.3694 .678 (.8698)	-.1437 .181 (.1070)	.9255 .405 (1.0524)
Financial Variables				
Revenue Increase 2010		.1083 .461 (.1427)		.1347 .432 (.1629)
Value Contracts 2010		-.7547 .505 (1.102)		-1.5586 .226 (1.1868)
Non LOC Funding 2010		4.0967 (.229) 3.243		4.9439 .177 (3.3383)
Line of Credit 2010		-.1261 .945 (1.7873)		1.4785 .489 (2.0383)
Summary Statistics				
SER (Root MSE)	1.187	2.0987	1.2662	2.0651
R^2	.0242	.4655	.0264	0.6516
N	274	25	210	20

Note: Unstandardized coefficients; P-value below; std. error in parenthesis, labeled for significance: *p£.10,**p£.05, ***p£.01

Table 19: Managerial Strengths Associated with Change in Employment Over Time Among Survey Firms

POSITIVE SIGNIFICANT COEFFICIENTS						
Strategy	**Year**	**Controls**	**Sample**	**N**	**Coefficient**	**Significance Level**
Overall leadership [1-3]	2008	Yes	Both	27	2.126	1%
Value of government contracts (% of revenue)	2008	Yes	Both	27	1.995	1%
Value of government contracts (% of revenue)	2009	Yes	Both	85	.5027	5%
Effectively marketing and selling services [1-5]	2009	Yes	Full sample	104	.2563	10%
Effectively marketing and selling services [1-5]	2010	No	Full Sample	274	0.82	10%
NEGATIVE SIGNIFICANT COEFFICIENTS						
Confidence in developing and implementing a sales strategy [1-3]	2008	Yes	Both	27	-1.589	5%
Confidence applying for government contracts [1-3]	2008	Yes	Both	27	-.5130	10%
Using effective HR procedures [1-5]	2010	Yes	Restricted	20	-3.4202	10%
Knowing how to make an effective case for additional funding [1-5]	2010	Yes	Restricted	20	-2.9568	10%

This table summarizes the results of the regression analysis across all three years of data, controlling for the local economic climate for particular industries. The year, significance level, and coefficient are reported in addition to the sample and the presence or absence of controls. In the "Sample" column, the term "both" indicates that a significant coefficient was found in both the sample of all businesses and the sample of businesses restricted to the most and least resilient. The term "full sample" indicates that only in the sample with all businesses was a significant coefficient found, and the term "restricted" indicates that only in the sample restricted to the most and least resilient businesses was a significant coefficient found. When a significant coefficient was found in both samples, the sample size N, the coefficient was presented only for the restricted sample.

These results should be interpreted with careful consideration of units. For example, a coefficient of 2.126 indicates each unit increase in the variable overall leadership is associated with a 213% increase in employment. This seems very large. However, the managerial strength "overall leadership" is expressed on a scale of 1, 2, or 3, so a 1-unit increase represents a very large (33%) change in the independent variable. This is a limitation of the data set, because it becomes difficult to analyze the impact of coefficients at a more detailed, incremental level. However, beyond the sign of the coefficient, the magnitude can be analyzed comparatively for variables measured on the same scale. These include, for example, confidence in developing and implementing a sales strategy and confidence in applying for government contracts.

As discussed above, several variables are found to be significant here with the opposite association that is found above. These managerial variables, "using effective HR procedures", "knowing how to make an effective case for additional funding", and "effectively marketing and selling services" present difficulty with respect to interpretation. Though quantitative analysis does not provide clear implications for these variables, they are none-the-less considered important and further addressed in the qualitative analysis. Furthermore, "confidence in developing and implementing a sales strategy" is found to be negatively associated, yet "effectively marketing and selling services" is found to be positively associated twice. The lack of precision in questions addressing marketing and sales strategies makes these results difficult to interpret definitively.

Regarding contracts, the "value of government contracts" is found to be positively associated with changes in employment, while "confidence in applying for government contracts" is found to be negatively associated, suggesting that while there may be a disconnect between confidence in applying for contracts received and value received, the value received is none-the-less positively associated with changes in employment.

Finally, "overall leadership" is found to be positively associated with changes in employment, but lacks nuance necessary for detailed interpretation as a managerial technique.

Table 20: Small Firm Owner Participation Rates by Race/Ethnicity and Gender

This table reflects the composition of the owners of small employer firms who participated in the qualitative analysis as well as the composition of the firms examined in the quantitative analysis. It is tabulated from self-identification of gender and selection of racial/ethnicity from the following options:

- White (Caucasian), non-Hispanic
- Black (African-American)
- American Indian or Alaskan Native
- Asian
- Hispanic/Latino
- Mixed/Other
- I prefer not to answer

Note that, in some cases, the small firm owner is classified in more than one category. Respondents who self-identified as any race/ethnicity other than “White (Caucasian), non-Hispanic” are considered “minority”, while respondents who self-identified as “American Indian or Alaskan Native” are considered “native.”

	TOTAL CASE STUDY FIRMS (n=26)	IN-DEPTH FIRMS (n=16)	SCREENED FIRMS (n=10)	TOTAL SURVEY FIRMS (n=374)
Minority male-owned	9 (34.62%)	6 (37.5%)	3 (30%)	170 (45.6%)
Woman-owned	5 (19.23%)	2 (12.5%)	3 (30%)	132 (35.4%)
Minority woman-owned	3 (11.54%)	1 (6.25%)	2 (20%)	81 (21.7%)
Native-owned	1 (6.25%)	1 (6.25%)	0	58 (15.5%)
Non-minority male-owned	12 (46.15%)	9 (56.25%)	3 (30%)	71 (19%)

Note that non-minority male owners are significantly over-represented among total case study firms, as compared to the race/ethnicity and gender composition of the total survey firms. Minority male owners are also somewhat over-represented in the case study analysis. This is an artifact of the research process. After conducting the qualitative analysis, the research team had taken steps to reach out to firm owners identified as belonging to a range of race/ethnicity and gender categories. However, the actual composition of the case study analysis was dependent upon the firm owners that responded to requests to participate in the qualitative research process. Likewise, the composition of the in-depth firms is largely based on the firm owner’s willingness to participate in an in-depth interview.

Most likely, this imbalance can be attributed, at least in part, to the small sample size of the case study analysis. Moreover, as this study was focused any relationship between managerial strengths and job growth, no attempt was made to explore any role that race/ethnicity and gender might play in firm resiliency.

Table 21: Managerial Strengths and Strategic Challenges as Identified by Case Study Firms

This table reflects key details about each small employer firm and several key details from the screening call or in-depth interviews. The owners of a total of 26 small employer firms participated in the 15-minute screening call. Of these, 16 firm owners participated in the longer, in-depth interviews. Participants in the longer interviews are referred to as “case study firms” in this study; the others are known as “screened firms.”

The criteria for inclusion was based on job growth performance in relation to the city and industry as well as on placement in the grouping framework, as previously established in the quantitative analysis (see Table 6). It is worth noting that the majority of firms were initially identified as “higher resiliency”, although the screening calls and in-depth interviews later suggested that a number of firms might well belong in different grouping category. Additional selection criteria include those firms (1) operating in a low- or moderate-income census tract, (2) possessing a minimum of five employees, (3) that have survived at least two national or regional recessions or downturns, and (4) that have studied Interise curriculum no later than 2009 in order to have the time to incorporate business training.

Based on these criteria, a sample number of businesses were contacted for phone screening and, in some cases, for in-depth interviews. The interviews were structured and consisted of a series of questions posed to the business owner to determine the managerial strengths that each identified as critical to the stability and growth of his/her firm. Owners were also asked to identify current challenges. Firm owners were asked to assess the perceived risks to their businesses, as well as to reflect on their managerial strengths and key challenges, particularly in response to the ongoing economic uncertainty.

Resiliency rankings are based on the framework developed for the difference in means tests and outlined in Table 5. Likewise, the differential was developed to determine the percent change in employment for each firm in relation to the overall percent change in employees in the same industry and city over the same time period.

The listed annual revenues are based on publicly available Manta data, except where the otherwise noted. Likewise, fulltime employees (FTEs) are based on owner-reported figures. Although there is not sufficient data about any one city or industry to identify more nuanced trends, it is possible to examine these firms and their managerial strengths in aggregate.

The dates that the firm owner participated in the Interise small business training program and spoke to the study authors appear below the table. To maintain confidentiality, the names of the businesses and business owners have been replaced with letters and numbers.

<table>
<tr><th colspan="5">SMALL EMPLOYER FIRM</th><th colspan="2">IN-DEPTH INTERVIEW</th></tr>
<tr><th></th><th>Annual Revenue</th><th>Job Growth</th><th>Differential</th><th>Resiliency Grouping</th><th>Managerial Strengths
(Comments paraphrased from interviews)</th><th>Strategic Challenges</th></tr>
<tr><td rowspan="2">CS1.</td><td colspan="4">Case study firm owner operates a home furnishings store that specializes in offering “rooms to go.” His store caters to customers with poor or mixed credit. Founded as a thrift store in the 1960s, the African-American owner took over in 1997. He transformed the business, expanding several times. The firm is now located in a 42,000 square foot showroom in an area of Dallas that is on the decline. According to the owner, “I’m staying and helping to build it back up.” Today the company has 20.5 employees and is planning to open an office furniture store in 2012.</td><td rowspan="2">Market toward all generations; rely on word of mouth
Specialize in customers that need “second chances” and offer 45-day price guarantee
Focus on offering quality goods in the right location
Having a clear business plan and able to exceed all of owner’s goals and plans in the past 10 years
Business networks have helped owner access private investors who support business’s growth
Need to hold your staff accountable and make sure they “get the job done” and make the firm successful
Keep close eye on financials – check everyday – to keep operating expenses as low as possible</td><td rowspan="2">Access to capital
Having inventory in stock and getting it to customers quickly enough that don’t lose them</td></tr>
<tr><td>$2.5 - 5 million</td><td>20.5 employees in 2011, up from 7.5 in 2009</td><td>Added jobs 169.29% faster than losing city/ industry</td><td>1</td></tr>
</table>

SMALL EMPLOYER FIRM					IN-DEPTH INTERVIEW	
	Annual Revenue	Job Growth	Differential	Resiliency Grouping	Managerial Strengths (Comments paraphrased from interviews)	Strategic Challenges
CS2.	The owner has operated a welding and fabrication company for 23 years. His clients are area businesses. Although he has had to remain innovative to maintain his business in a depressed region, the owner has recently brought in business by becoming more involved with business associations and a more prominent participant in community projects.				"Push to get out of comfort zone" – from word of mouth to talking to area businesses around and getting involved in networking opportunities to drive sales and grow brand Doing things in community so that have greater brand recognition Closely monitor cash flow & receivables – usually has about 3-4 weeks in reserve Only uses capital, no loans or credit	Don't have the man-power & very difficult to find good people – I call them "gold-collar jobs"
	$1 - 2.5 million	10 employees in 2011, up from 8 in 2010, and 5 in 2009	Added jobs 72.85% faster than losing city/ industry	1		
CS3.	In 1998, the firm co-owner and his wife opened an electrical contracting and construction company. The recession has forced them to closely manage costs as well as to diversify and differentiate the firm in several ways. First, the owner reports that he has focused on the firm's strategic niche in securing technical hospital project contracts. In addition, he has also recently formed a joint venture to help improve the minority-owned firm's ability to win larger contracts. The owner reports that firm currently has 44 employees, although that number swelled to 60 or 70 during the summer busy season.				Value proposition - offer best service at the best cost Existing relationships have kept firm operating Looking for more technical projects where the firm has expertise and would be competing against a smaller number of people Created joint venture to take on bigger projects Willingness to travel outside of metro area for business	Since the recession, it's been really difficult to get new business New client opportunities. Need a plan to find and solicit new clients – "companies often want to test us out first but in a tight market, nobody wants to take a risk on company they don't know"
	$2.5 - 5 million	60-70 employees in 2011, up from47 in 2009	Added jobs 35.18% faster than a losing city/ industry	1		

<table>
<tr><th colspan="5">SMALL EMPLOYER FIRM</th><th colspan="2">IN-DEPTH INTERVIEW</th></tr>
<tr><th></th><th>Annual Revenue</th><th>Job Growth</th><th>Differential</th><th>Resiliency Grouping</th><th>Managerial Strengths
(Comments paraphrased from interviews)</th><th>Strategic Challenges</th></tr>
<tr><td rowspan="2">CS4.</td><td colspan="4">Co-founded the architecture firm in 2001. Since that time, the native-owned firm has focused largely on government contracts. In response to an increasingly competitive landscape, the firm recently has expanded into construction and design-build projects. Additionally, the firm is seeking contracts for regional and national projects.</td><td rowspan="2">Above all, native-owned (identified by co-owner as primary managerial strength)
We provide extraordinary service. Majority of clients are return business
Employee management is critical, and is complimentary with customer service – “We have in-house training, and believe in letting people go as far as they can go. Our CAD systems are at the top of industry standards.”
Winning contracts is a cornerstone strategy. Bureau of Indian Affairs’ RFP process focuses on six areas, so put together a specific proposal for those 6 criteria
Aggressive marketing strategy – move nationally</td><td rowspan="2">With recession, it’s gotten more difficult. Facing competition from multinationals so have to team up with bigger firms. “Marry or burn!”
Had been focused on architecture but now have to do design-build to survive</td></tr>
<tr><td>$1 - 2.5 million</td><td>35 employees in 2011, up from 31 in 2010 and 21.5 in 2008</td><td>Added jobs 67.40% faster than gaining city/ industry</td><td>1</td></tr>
<tr><td rowspan="2">CS5.</td><td colspan="4">Since opening a vegetarian restaurant in 2002, the owner has focused on appealing to a broader, health-conscious clientele, and expanded into three area locations. Facing the challenge of managing labor costs, and a fire that required her to close one location for extensive repairs, the owner reduced wait staff hours and opted not replace staff lost to attrition. The owner is currently working to diversify into other regions or niches in the growing healthy food and lifestyle industry.</td><td rowspan="2">Making a good product and offering healing food for niche market
Do what customers want – rely on word of mouth
Access to capital is critical. When needed cash reserves, able to secure a private loan
Diversify – have started to offer cooking classes and want to open online gluten-free bakery
Education sells this business
Managing costs – supplies critical but labor is the biggest cost we that face</td><td rowspan="2">Access to capital
Need better relationship with suppliers to negotiate better prices</td></tr>
<tr><td>$.5 – 1 million</td><td>37.5 employees, down from 60 in 2010 and up from to 11.5 in 2008</td><td>Added jobs 426.49% faster than losing city/ industry</td><td>1</td></tr>
<tr><td rowspan="2">CS6.</td><td colspan="4">The owner has operated this brewery and restaurant for 16 years, when he bought the failing business and returned it to profitability. He reports that the ongoing economic uncertainty has been a challenge but that he’s learned to bring down and closely manage his costs as well as develop innovative strategies to bring in value-conscious customers. Currently, the restaurant has about 30 full-time and 20 part-time employees, although that number has fluctuated over the past few years.</td><td rowspan="2">Needed to manage hard costs
Improved process – and what our staff can handle. 6-8 tables instead of 4 tables. Changed expectations. Re-worked menu (increased prices) and POS systems. To make flow as good as possible and give remaining staff bigger sections. They get paid more.
Management has been huge – need to bring in the right people and let them be part of the decision-making process
Clear branding – need to know how to position restaurant
Critical to have no debt – private loan
Strategic business plan – in conjunction with senior staff
Networks within community – business leader</td><td rowspan="2">Access to capital – there needs to be a better way for banks to analyze what’s a good risk</td></tr>
<tr><td>$1–2.5 million</td><td>40 employees, down from 45 in 2010, and up from 32.5 in 2008</td><td>Added jobs 44.80% faster than a losing city/ industry</td><td>1</td></tr>
</table>

<table>
<tr><th colspan="5">SMALL EMPLOYER FIRM</th><th colspan="2">IN-DEPTH INTERVIEW</th></tr>
<tr><th></th><th>Annual Revenue</th><th>Job Growth</th><th>Differential</th><th>Resiliency Grouping</th><th>Managerial Strengths
(Comments paraphrased from interviews)</th><th>Strategic Challenges</th></tr>
<tr><td rowspan="2">CS7.</td><td colspan="4">The owner co-founded a medication therapy management company on an innovative business idea. The Des Moines-based firm acts as an intermediary between insurance companies and pharmacies. The company's clients include a number of insurance companies or self-insured employers and a network of 40,000 pharmacies nationwide. Today, this company boasts 40 employees, up from 25.5 in 2010. The owner projects that, in 2011, the company's revenue will be up 530%, and that profits will be up 490%.</td><td rowspan="2">Innovative business model - getting the pharmacies on board was really difficult. Complete paradigm shift from selling product to selling a service. Helping was seen as a gratis service, and not core to the business.
Needed $300,000 from 30, mostly pharmacist, investors
Innovative sales strategy in response to recession-related challenges – offered product guarantee
Protect work culture
Build employees into ownership structure</td><td rowspan="2">New competitors on scene & not sure what to do next. Might be M&A but not sure</td></tr>
<tr><td>Owner-reported $13–18 million</td><td>40 employees in 2011, up from 25.5 in 2010 and 16 in 2008</td><td>Added jobs 75.73% faster than losing city/industry</td><td>1</td></tr>
<tr><td rowspan="2">CS8.</td><td colspan="4">The supply-chain Software-as-a-Service (SaaS) solution company was founded in 2000. By facilitating the real-time exchange of documents between incompatible business systems and technologies, the owner takes advantage of cloud computing to enable firms to improve revenue, operational efficiencies, and profitability. He has initially focused on the $300 billion aftermarket automotive industry. Describing his business as counter-cyclical to the economy, the owner estimates that business is up 80% for the year. Employee rate is up 10% for the year.</td><td rowspan="2">Innovative technology – providing platform and tools to apply to market and to customers (VIC)
Private investors (VC). Cash flow covers operations – in 18 months, would like line of credit on accounts receivable.
Open book management - innovative way to run business
Creating a good work culture & investing in people is key
Strategic growth plan across vertical markets</td><td rowspan="2">Managing growth</td></tr>
<tr><td>$3–3.5 million</td><td>42 employees in 2011, up from 38 in 2010, and 37.5 in 2009</td><td>Maintained jobs at -3.68% in a losing city/industry</td><td>2</td></tr>
<tr><td rowspan="2">CS9.</td><td colspan="4">The owner has operated the visible emissions testing and certification services firm since 1997. The firm has a national clientele and CS9 projects 10-15% growth in 2011.</td><td rowspan="2">Diversify business - willingness and ability to be nimble and take opportunities that arise – working on new product development
It's critical to keep good people on the payroll
Working to increase reserves & working on cash flow management plan so won't need to borrow – use AMEX but pay off at end of month
Won't borrow money and won't go into debt for new product development</td><td rowspan="2">Regulations drive my business, but if not required it wouldn't be done. --Still, challenge to stay compliant
Attracting talent we can afford</td></tr>
<tr><td>N/A</td><td>8 employees, down from 8.5 in 2009, and up from 6 in 2008</td><td>Added jobs at 49.61% faster than losing city/industry</td><td>1</td></tr>
</table>

<table>
<tr><th colspan="5">SMALL EMPLOYER FIRM</th><th colspan="2">IN-DEPTH INTERVIEW</th></tr>
<tr><th></th><th>Annual Revenue</th><th>Job Growth</th><th>Differential</th><th>Resiliency Grouping</th><th>Managerial Strengths
(Comments paraphrased from interviews)</th><th>Strategic Challenges</th></tr>
<tr><td rowspan="2">CS10.</td><td colspan="4">The owner operates a janitorial supply company. When he took over the business from his father in 2006, the business was successful but stagnant. Since then, he has transformed the firm into a retail success, reducing costs and increasing profitability. This formula has allowed the owner to more than double his staff and to hire a general manager to handle day-to-day company operations.</td><td rowspan="2">Changed business model. It's unorthodox in our industry but moved away from contracts and brought in retail strategies

Increase profit margin by cutting costs: 1) trim inventory through software to bring down debt stock and opportunity stock 2) cut credit card processing fees in half through new processing equipment 3) buying direct w/o sales people

Changed focus and now have a different customer base. Competitors focus on high end and we focus on the low end –customers are Spanish-speaking and focused on price and not on green (we don't have too many competitors)

It's key to be able to delegate. Got leaner so could increase margins and then hire a general manager</td><td rowspan="2">Managing more people = more problems. Being able to delegate

Unable to secure distributorships

Not involved in business community</td></tr>
<tr><td>Owner-reported approx. $5 million</td><td>15 employees in 2011, down from 16 in 2010, and up from 14 in 2009 and 7 in 2006</td><td>Added jobs 10.18% faster than a gaining city/industry</td><td>1 / 5 *Industry change between 2008-2009</td></tr>
<tr><td rowspan="2">CS11.</td><td colspan="4">The owner founded a security services business in Philadelphia. Since founding the minority-owned company in 2005, the owner has focused on strategic partnerships with large non-minority firms. The company is currently operating in multiple states and looking to expand into other markets. Key to his success, the owner believes, is that he is fair with his employees. He pays them weekly and encourages contract employees to buy into employee health care, perks that are critical for his employees and makes them more likely to stay with him.</td><td rowspan="2">Treat employees well – offer benefits (buy-in for part-time), weekly pay

Had to tighten belt to make through difficult time & asked employees to do more

Saw need for minority-owned companies to act as diverse suppliers to large firms –strategic partnerships with large companies

Learn contract cycles – keep business coming in – all potential customers

Access to capital

Keep close eye on financials, particularly cash flow so can make pay days. Margins no longer there</td><td rowspan="2">Biggest hurdle getting increase in line of credit</td></tr>
<tr><td>$2.5-5 million</td><td>225 employees in 2011, up from 175 in 2010 and 70 jobs in 2008</td><td>Added jobs 137.19% faster than a gaining city/industry</td><td>3</td></tr>
<tr><td rowspan="2">CS12.</td><td colspan="4">The owner started his pest control business in 1980. Since then, he has largely catered to commercial businesses. The owner projects that business will increase by 10% in 2011, as it did in 2010.</td><td rowspan="2">Financials are critical

Having the working relationships with banks so that able to get loans

Marketing – knowing what direction you're business is going in

Being able to get workers and allow them to do their jobs. Teamwork</td><td rowspan="2">Access to capital

Manage growth</td></tr>
<tr><td>Less than $.5 million</td><td>16 employees in 2011, up from 11.5 in 2010, and 7.5 in 2009</td><td>Added jobs 39.81% faster than gaining city/industry</td><td>3</td></tr>
</table>

<table>
<tr><th colspan="5">SMALL EMPLOYER FIRM</th><th colspan="2">IN-DEPTH INTERVIEW</th></tr>
<tr><th></th><th>Annual Revenue</th><th>Job Growth</th><th>Differential</th><th>Resiliency Grouping</th><th>Managerial Strengths
(Comments paraphrased from interviews)</th><th>Strategic Challenges</th></tr>
<tr><td rowspan="2">CS13.</td><td colspan="4">The co-founder of a Philadelphia-based recycling services company credits his success with developing an innovative niche business and then working around the clock to make it work. The company collects an estimated 200 tons of unwanted mixed building materials daily from contractors and manufacturers. 80% of this content is diverted for reuse. The owner is currently working to expand into the fiberglass, Styrofoam and carpeting markets, among others. The minority-owned company was founded in 2004 and projects $5 - 6 million in gross sales in 2011.</td><td rowspan="2">Staying true to mission – managing between green and running a profitable business
Access to capital has been tricky but just got a $1 million private loan in 2010
Innovative within our industry, locally – innovative idea but also offering single-stream recycling as well as generating recycling (performance) reports. We know that we're offering a valuable product because we see that our reports come back with our competitions' logo on them.
Hold onto customers – operate on referrals and existing business – first priority is to manage the business you have
Employee turnover is non-existent</td><td rowspan="2">Now just spending 12 hours a day putting out problems and no time to continue to innovate
Biggest liability – regulation and permitting. Huge trash companies have lobbyists
Biggest mistake has been not sufficiently delegating
I have not hired enough people to prepare for growth</td></tr>
<tr><td>$1.7 million</td><td>38 employees in 2011, up from 27 in 2010, and 14 in 2009</td><td>Added jobs 79.33% faster than gaining city/industry</td><td>3</td></tr>
<tr><td rowspan="2">CS14.</td><td colspan="4">The owner opened his pest control business in 1994. Since then, he has largely secured contracts with commercial and public agencies. The owner reports that business is up by 20% in 2011, in part because of the bed bug explosion. He is currently working to expand his residential clientele.</td><td rowspan="2">Have capital available to try new things
Know how to manage funds and people so stuck with what's working
Trust employees</td><td rowspan="2">Will need to bring in new employees once older ones retire
Bring in son to take over the business</td></tr>
<tr><td>N/A</td><td>10 employees in 2011, up from 9 in 2009, and 7 in 2008</td><td>Added jobs 11.20% faster than gaining city/industry</td><td>3</td></tr>
<tr><td rowspan="2">CS15.</td><td colspan="4">The owner founded his biotech consulting firm in 2007. He reports that biotech has remained relatively robust through the recession, and believes that his business has grown as companies have been more interested in hiring contract employees instead of staff. In addition, he is considering whether to expand to another city, or overseas. Currently, the firm employs 12 consultants and 3 office staff and projects $3 - 3.5 million in revenue in 2011.</td><td rowspan="2">Focus on core & key differentiators – consulting/ contract employees
Recession might have helped with contracting
Branding –importance of consistent messaging & helped the firm focus on its core services
Delegate – brought in director of operations and now need marketing – to focus on strategic things
Started with personal loan. Now manage with company cash reserves</td><td rowspan="2">Managing staff
Hire management</td></tr>
<tr><td>N/A</td><td>15 employees in 2011, up from 8 in 2009</td><td>N/A</td><td>N/A</td></tr>
</table>

SMALL EMPLOYER FIRM					IN-DEPTH INTERVIEW	
	Annual Revenue	Job Growth	Differential	Resiliency Grouping	Managerial Strengths (Comments paraphrased from interviews)	Strategic Challenges
CS16.	The CEO of the banner and stitching retail company has run the firm since 2005. Her husband bought the business in 2002. The CEO-owner reports that the recession has been particularly challenging for the business. She notes that generating new sales and securing loans and lines of credit have been particularly challenging. In 2010, the owner used a $300,000 personal loan to keep the company afloat after she was unable to get a bank loan.				Focus on core business, and not agree to do projects that are out of our areas of expertise and cost us too much to complete. Important to diversify product mix Cash flow is everything Also unable to get line of credit so working to build a reserve account ($30,000-40,000) for winter Need to build out existing & bring in new clients – need to build out sales group Customer relations	HR - managing people and bringing in people that need to grow the business Access to capital Marketing has been "a disaster" Sales
	$500,000 - $1 million	10 employees in 2011, down from 13.25 in 2009	N/A	N/A		

ADDITIONAL INTERVIEWS						
SMALL EMPLOYER FIRM					SCREENING INTERVIEW	
	Annual Revenue	Job Growth	Differential	Resiliency Grouping	Managerial Strengths (comments paraphrased from interviews)	Strategic Challenges
SB17.	Screened business owner is the founder of a design and communication firm that offers a range of editorial and publishing services. The woman-owned company was founded in 2003 and has six employees.				Diversification of the client base has been critical Quality work delivering high-quality projects, on-budget and on-time, and maintain great relationships with clients Smart, focused growth as to expand business from editorial contracts to design services	Business development Business networks
	$500,000 - $1 million	6 employees in 2011, down from 8 employees in 2010 and up from 5.5 in 2009	Added jobs 42.17% faster than city/industry	1		
SB18.	The owner has operated a coffee roasting company since he founded the business 28 years ago. A third generation coffee roaster, the owner has worked hard to differentiate his business to respond to the substantial competition and to manage the unpredictability of a business heavily dependent on the commodities market. He tried expanding the business to include two retail stores, but later substantially downsized his firm to focus again on the core roasting business. The owner now markets himself as a "coffee consultant" and diversifying his distribution through the private label, custom-roasting business.				Customer is our focus. Build relationships and they'll come with us because we're in business to provide the best coffee but also the best service. Working as a coffee consultant Critical to differentiate – focus is on private label, custom roast business, and new avenues of distribution. Office coffee service, for example, and might want private label. Help design and put in own packaging	It's really difficult to grow firm. We used to be number one coffee source (in early 1980s, when there were six roasters in the phonebook). Now there are 41. Coffee prices have skyrocketed. Haven't been able to anticipate how high they'll go so keep under-pricing. Keeping track of the market is a full-time job – have to make quick decisions.
	$10 – 20 million	15 employees, down from 24 employees in 2009	Added jobs 5.83% faster than city/industry	1		
SB19.	The owner has operated his automotive repair business for 35 years. Although he reports that his business is relatively recession-proof, the owner believes that he has managed through difficult economic times because he has a loyal customer base and has worked to cut expenses and increase his cash reserves.				Good customer base, and keep them by offering quality service Cash reserves Continue to spend on marketing, even in tough times Keeping operating expenses as low as possible	Bringing in management. Tried 3 people and none have worked out Access to capital – has been a nightmare
	$1 – 2.5 million	14 employees in 2011, down from 17 in 2010, and up from 11 in 2008	Added jobs 60.88% faster than city/industry	1		

<table>
<tr><td rowspan="2">SB20.</td><td colspan="4">The owner founded and operated the laser printer service and sale company since 2002. During the recession, the owner began to offer leasing and repair services. He credits his success with the financial discipline that allowed him to re-invest in the firm, his commitment to his employees, and his ability to transition from a product to a service-oriented business. In early 2011, SB20 sold the business to a subsidiary of Xerox.</td><td rowspan="2">Managing overhead very carefully – and operating below means
Key to brand the business and stand out from competition. Invested in service area because in difficult times, customer service becomes more important than selling products
Stay in touch with customers
Work with a small business training program – monthly service – and have a coach
Value employees – even in difficult times, spent money training and kept wages competitive but frozen. Gave bonuses
Access to capital
In May sold company to Fortune 500 company</td><td rowspan="2">Growing the business when printer sales stagnated
Marketing plan to correspond with revised business plan</td></tr>
<tr><td>$2.5 - 5 million</td><td>15.5 in 2010, up from 8 in 2008</td><td>Added jobs 108.23% faster than city/industry</td><td>1</td></tr>
<tr><td rowspan="2">SB21.</td><td colspan="4">The owner has operated his Memphis-area screen-printing and custom clothing business since 1996. Recently, the minority business owner reports that he has expanded into the tax industry.</td><td rowspan="2">Good customer service
Marketing to bring in new customers
Thinking ahead of the game
Networking, joining business organizations such as the Chamber of Commerce and Rotary Club. “These are the things you need to do (to be successful)”
Access to lines of credit is important, but you have you know somebody to get anywhere at a bank</td><td rowspan="2">Have a contract with city public schools. Would like to be able to secure more contracts.</td></tr>
<tr><td>$300,000</td><td>14.5 employees in 2011, down from 28 in 2010, and 17 in 2009</td><td>Maintained jobs at 55.60% higher than city/ industry</td><td>2</td></tr>
<tr><td rowspan="2">SB22.</td><td colspan="4">The interviewee co-founded the management consulting firm in 1995 with several siblings. Since then, the minority-owned family business has largely focused on providing services to governmental entities as well as providing consulting assistance with process management, knowledge transfer, and strategy. Currently, the owner is exploring whether it is possible to simplify their process and build partnerships to expand into another city.</td><td rowspan="2">Much of business is focused on providing discrete services, as opposed to consulting
Brought in talented people and offer profit sharing
Once get customer, try to offer multiple services, rather than focus on new customers. 50% of work is contracts with public works departments</td><td rowspan="2">Bringing in new business</td></tr>
<tr><td>Less than $500,000</td><td>9.5 in 2011, down from 10 in 2010, and up from 6.5 in 2008</td><td>Added jobs 60.65% faster than city /industry</td><td>1</td></tr>
</table>

	SMALL EMPLOYER FIRM				SCREENING INTERVIEW	
	Annual Revenue	Job Growth	Differential	Resiliency Grouping	Managerial Strengths (Comments paraphrased from interviews)	Strategic Challenges
SB23.	The owner has operated the janitorial supply company for 23 years. Over the past three years, this minority, woman-owned company has lost the majority of its private industry contracts. Now the company largely relies on government contracts, and actively seeks to build new business with existing clients.				Relying on government contracts Get contract and then look to do other services for government client	Access to credit – need upfront funds to be able to get larger contracts Over the past three years, have lost major contracts with private industry, which has gone out of business or have lost in the bidding process
	$300,000	14.5 employees in 2011, down from 28 in 2010, and 17 in 2009	Maintained jobs at 55.60% higher than city/industry	2		
SB24.	The founder of an environmental construction and technology firm agreed to a screening interview for this study. The firm focuses on multiyear contracts with federal agencies, including defense. In 2009, the minority-owned firm was named one of the fastest growing inner city companies by Bloomberg BusinessWeek. This company owner was named the Small Business Association's Small Minority Business Person of the Year. In the last couple of years, the firm has been developing a niche skill and partnering with larger companies or other small businesses to secure particular contracts. SB24 estimates more than $30 million in gross revenue and a 40% growth rate in 2011.				Develop niche skill and remained focused on our strategy, despite bad economy and need to keep that focus as grow Very focused on government contracting as a strategy Shifted to greater focus on teaming up with partners and joint ventures to go after specific projects Financial discipline- "This allowed us to maintain more than 100% growth for 4-5 years" Expanding regionally as well as globally Continue expanding skills Need discipline and can't lose focus in this time period, need niche and need to stick with it	Remaining competitive Securing larger contracts
	Owner- reported annual revenue $30 million	110 in 2011, up from 90 in 2010, and 57 in 2009	Added jobs at 428.33% faster than city/ industry	1		

	SMALL EMPLOYER FIRM				SCREENING INTERVIEW	
	Annual Revenue	Job Growth	Differential	Resiliency Grouping	Managerial Strengths (Comments paraphrased from interviews)	Strategic Challenges
SB25.	The owner runs a heavy construction and metal fabrication firm that has largely relied on federal government contracts to rebuild levees after Hurricane Katrina. However, these contracts will end in 2011, and the owner does not anticipate that she will be competitive in securing new contracts. Additionally, the firm has no way to pay back a $1 million federal loan. In the meantime, the owner is working to build up the metal fabrication side of the business.				Working to grow fabrication business Access to capital Specialty licensing in dredging, draining, and levee construction to bid on particular contracts	Heavy construction contracts are ending at end of 2011 $1 million collateral loan from Katrina and now trying to get it forgiven, or at least forgiven the interest Assembling a new strategic plan Not confident in ability to get more construction contracts but hopeful that will get hired as a sub-contractor
	Owner-reported annual revenue $11 million	15 employees in 2011, down from 21 in 2010, up from 13.5 in 2008	Added jobs at 60.80% faster than city/ industry	1		

<table>
<tr><th colspan="5">SMALL EMPLOYER FIRM</th><th colspan="2">SCREENING INTERVIEW</th></tr>
<tr><td rowspan="2">SB26.</td><td colspan="4">The owner founded her pre-clinical testing services firm in 1994. In the past few years, the firm has lost many of its customers because “most are out of business and out of money.” Initially, the woman minority-owned firm sought to strategically expand by hiring a CEO and marketing itself as a specialty firm focused on the cardiac safety of drugs. Displeased with this decision, SB26 now is considering moving out of pre-clinical testing and into drug discovery itself.</td><td rowspan="2">Keep track of the bottom line – careful with costs

Employees first

Access to capital – no investors and don’t use line of credit.</td><td rowspan="2">“Big pharma” is coming apart. Small biotech is not getting investors they need

Hired CEO and it’s been a disaster

Need to rethink entire business. Hired CEO and downsized services offered to focus on one but it was a mistake.

Thinking about acting as own drug-discovery company</td></tr>
<tr><td>Owner-reported annual revenue $1.7 million</td><td>7 employees, down from11.25 in 2007</td><td>N/A</td><td>N/A</td></tr>
</table>

CASE STUDY FIRMS	SCREENED FIRMS
1. Dallas 2009 SBA e200; phone interview September 8, 2011	17. Des Moines 2009 SBA e200; phone interview August 18, 2011
2. Detroit 2009 SBA e200; phone interview September 13, 2011	18. Portland 2009 SBA e200; phone interview August 30, 2011
3. Portland 2009 SBA e200; phone interview September 24, 2011	19. Des Moines 2008 SBA e200; phone interview August 31, 2011
4. Albuquerque 2008 SBA e200; phone interview September 9, 2011	20. Des Moines 2008 SBA e200; phone interview August 30, 2011
5. Albuquerque 2008 SBA e200; phone interview August 22, 2011	21. Memphis 2008 SBA e200; phone interview August 31, 2011
6. Des Moines 2008 SBA e200; phone interview September 12, 2011	22. Milwaukee 2008 SBA e200; phone interview September 7, 2011
7. Des Moines 2008 SBA e200; phone interview September 14, 2011	23. Detroit 2009 SBA e200; phone interview September 1, 2011
8. Des Moines 2008 SBA e200; phone interview September 7, 2011	24. Detroit 2009 SBA e200; phone interview September 7, 2011
9. Memphis 2008 SBA e200; phone interview September 7, 2011	25. New Orleans 2008 SBA e200; phone interview September 20, 2011
10. Dallas 2009 SBA e200; phone interview September 9, 2011	26. Boston 2007 Interise; phone interview September 7, 2011
11. Philadelphia 2009 SBA e200; phone interview September 6, 2011	
12. Philadelphia 2009 SBA e200; phone interview September 2, 2011	
13. Philadelphia 2009 SBA e200;phone interview September 10, 2011	
14. Philadelphia 2008 SBA e200; phone interview September 9, 2011	
15. Boston 2009 Interise; in-person interview September 8, 2011	
16. Boston 2009 Interise; in-person interview September 7, 2011	

Table 22: Categories of Participant Responses Among Case Study Firms

This table organizes the range of interview responses into common categories. These categories are based on deductive methods, employing Michael Porter’s work on strategy and strategic planning (namely, “What is Strategy?”) and ICIC’s research, “Successful Inner City Businesses.” In addition, these categories are based on inductive methods, logically grouping the responses based on language and concepts articulated by the small employer firm owners interviewed.

CATEGORIES, MANAGERIAL STRENGTHS	PARTICIPANT RESPONSES (paraphrased)
Strategic positioning (includes strategic advantage and ability to differentiate from competitors)	Specialize in customers that need “second chances” so offer no-credit financing and 45-day price guarantee Specialize in projects /activities that require particular technical expertise Native-owned Diversify service or product offerings to adapt to customer demand Innovative or niche business model Innovative sales strategy that reduces barriers to attracting new business Focus on core services, and on key differentiators Need niche and need to stick with it
Scale back to focus on core business	Keep up with industry advances in core focus of business Lose contracts so fall back on core business
Brand/marketing	Continue to spend on marketing or expand marketing Push to get out of comfort zone and get involved in networking opportunities to reach area businesses (potential customers) Consistent messaging & help the firm focus on core services and/or bring in new business
Demonstrate leadership	Promote culture of teamwork Knowing direction business is going in Thinking ahead of the game Need niche and need to stick with it
Employee management (includes hiring the right staff and having the willingness/ability to delegate to that staff)	Hold staff accountable to get the job done Employee management is critical; there needs to be the right fit and the right skills Value employees and protect work culture Ask employees to do more (loyalty on both sides) Build employees into ownership structure Get lean so could increase margins and then hire senior staff Reduce employee turnover
Financial discipline, including ability to control costs	Manage operating expenses to keep costs as low as possible and/or operate below means Closely manage cash flow and receivables Managing hard costs of inventory, business services and labor Manage/control costs to be able to improve process and/or increase margins

CATEGORIES, MANAGERIAL STRENGTHS	PARTICIPANT RESPONSES (paraphrased)
Access to capital	Critical to have no debt Use cash reserves only and/or no loans or credit Secure private loan to be able to expand Use personal funds (credit cards or money) to cover gaps in cash flow Secure loan through group of like-minded investors Use cash flow to cover operational expenses
Focused growth plan	Working relationship with banks so able to get loans and/or credit Exceed all goals and plans in the past 10 years Develop strategic plan in conjunction with senior management Develop plan across vertical markets

Business networks	Business networks helped business owner find investors and attract customers Networks provide support, coaching, and mentorship to help business owner
Customer relations	Retail store market toward all generations and offer price guarantee Provide superior service so have return business Educate customers while providing support Focus on alternative customer base
Secure new business / contracts	Willing to travel outside of metro area for business Winning contracts is a cornerstone strategy so key management/ staff focus Once get contracts, try to expand types of services paid to do Diversify customer base
Build partnerships (includes joint ventures)	Create joint venture to take on bigger projects Team up with bigger firms to be able to compete for specific projects Strategic partnerships with large, non-minority companies

CATEGORIES, STRATEGIC CHALLENGES	PARTICIPANT RESPONSES (paraphrased)
Respond to a changing environment	Maintaining enough inventory in stock to get it to customers quickly enough Have to take on the kinds of work that wouldn't have done five years ago Moving into new regions or areas Unsure how to respond to new competition and declining competitive advantage How to differentiate in a crowded field / how to differentiate from big firms
Employee management (includes hiring the right staff and having the willingness/ability to delegate to that staff)	Difficulty finding trained staff (in the trades) Difficulty hiring the right person for the work culture Attracting talent that we can afford More people equals more problems Choosing the right people to grow the business Haven't hired the right people to prepare for growth
Effective marketing	Can't do without the right person Marketing has been a disaster Marketing plan to correspond to business plan
Access to capital	Securing loans and/or lines of credit Managing with personal funds There needs to be a better way for banks to analyze what's a good risk Need upfront funds to be able to get larger contracts
Financial discipline, including ability to control costs	Negotiate for better prices (and lower costs) Managing costs for supplies and/or commodities Accurate pricing to preserve margins
Ability to effectively manage growth	Growing "organically" so don't expand too quickly Maintain growth rate while remaining innovative

CATEGORIES, STRATEGIC CHALLENGES	PARTICIPANT RESPONSES (paraphrased)
Focused growth plan	Bring in son to take over the business Spending too much time on daily issues and no time to innovate Developing business
Secure new business/contracts	Getting new business because of reduced business opportunities and increased competition Unable to compete against big firms and/or private industry Re-directing efforts when establish business plan is no longer working
Business networks	Building networks
Unfriendly business climate (including regulations and taxes)	Unsupportive networks Regulations and permitting Taxes Minimum wage is eating up ability to hire wait staff

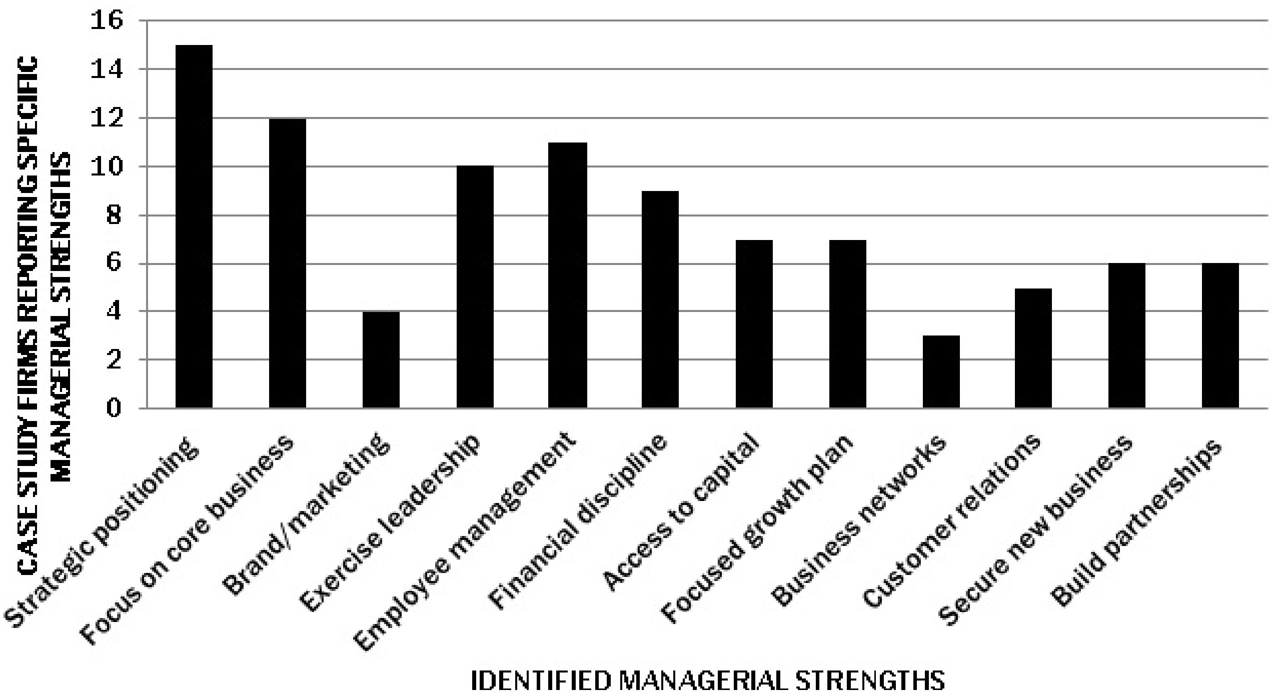
Table 24: The Categories of Managerial Strengths and Strategic Challenges by Case Study Firms

This table further organizes interview responses such that it is easier to tie managerial strength to individual firms.

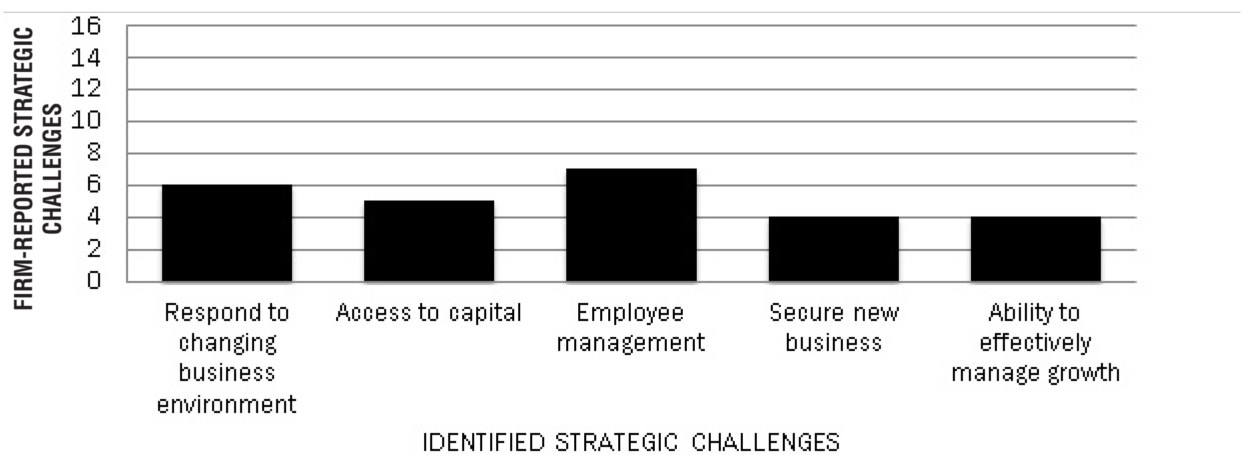
COMPANY				DIFFERENTIAL	RESILIENCY GROUPING	PARTICIPANT RESPONSES	
	Type	**Minority/ Woman-Owned**	**Annual Revenue**			**Managerial Strengths**	**Strategic Challenges**
CS1	Home furnishings	Y / --	$2.5 - 5 million	169.29%	1	Focus on core business Focus on differentiators Employee management Financial discipline Focused growth plan Business network	Access to capital Respond to a changing business environment

COMPANY				DIFFERENTIAL	RESILIENCY GROUPING	PARTICIPANT RESPONSES	
	Type	Minority/ Woman-Owned	Annual Revenue			Managerial Strengths	Strategic Challenges
CS2	Welding and fabrication	-- / --	$1 - $2.5 million	72.85%	1	Focus on core business Grow brand Financial discipline Cash reserves only, no borrowing	Hire staff Bring in new business
CS3	Electrical contracting and construction	Y / --	$2.5 - 5 million	35.18%	1	Customer relations Secure new contracts Develop strategic niche (focus on core business) Focused growth plan Build partnerships	Respond to a changing business environment Secure new contracts
CS4	Architectural and contracting	Y / --	$1 - 2.5 million	67.40%	1	Secure new contracts Focus on core business (Native-owned/niche) Customer relations Employee management Build partnerships Marketing strategy	Respond to a changing business environment Secure new contracts
CS5	Food services and drinking places	Y / Y	$.5 – 1 million	426.49%	1	Focus on core business Customer relations Diversify product offering Financial discipline Control costs	Access to capital Control costs
CS6	Food services and drinking places	-- / --	$1 – 2.5 million	44.80%	1	Financial discipline Control costs Employee management Focus on core business Focused growth plan Business networks	Access to capital

COMPANY				DIFFERENTIAL	RESILIENCY GROUPING	PARTICIPANT RESPONSES	
	Type	Minority/ Woman-Owned	Annual Revenue			Managerial Strengths	Strategic Challenges
CS7	Healthcare intermediary	-- / --	$13-18 million*	75.73%	1	Innovative business model Employment management Access to capital Good work culture Strategic innovation Build partnerships	Competition Respond to changing business environment
CS8	Software-as-a-Service (SaaS)	-- / --	$3 – 3.5 million	-3.68%	2	Focused growth plan Innovative business management Innovative employee management Good work culture Access to capital Business networks Build partnerships	Manage growth



COMPANY				DIFFERENTIAL	RESILIENCY GROUPING	PARTICIPANT RESPONSES	
	Type	Minority/ Woman-Owned	Annual Revenue			Managerial Strengths	Strategic Challenges
CS9	Environmental services	-- / --	N/A	49.61%	1	Diversify services Employee management Financial discipline Cash reserves only	Competition New product development Hire staff Government regulations
CS10	Janitorial supply	Y / --	Owner-reported approx. $5 million	10.18%	1 / 5 *(Industry change between 2008-2009)	Strategic innovation Financial discipline Control costs Delegate responsibilities (to focus on strategic) Focused growth plan	Employee management Secure distributorships Unfriendly business community
CS11	Security services	Y / --	$2.5 – 5 million	137.19%	3	Employee management Control costs Focus on core business Financial discipline Secure new contracts Access to capital	Access to capital, particularly lines of credit
CS12	Pest control	Y /--	Less than $.5 million	39.81%	3	Financial discipline Access to capital Strategic direction Employee management Effective marketing	Focused growth plan
CS13	Recycling services	-- / --	$1.7 million	79.33%	3	Focus on core business (strategic niche) Customer relations Innovative business model	Manage growth Hire staff Delegate responsibilities Strategic innovation
CS14	Pest control	Y / --	Approx. $.7 million	11.20%	3	Strategic innovation Employee management Cash reserves only Focus on core business Focused growth plan	Hire new employees



COMPANY				DIFFERENTIAL	RESILIENCY GROUPING	PARTICIPANT RESPONSES	
	Type	Minority/ Woman-Owned	Annual Revenue			Managerial Strengths	Strategic Challenges
CS15	Biotech consulting	-- / --	$3 – 3.5 million (owner reported)	N/A	N/A	Focus on core business Differentiate from competitors Branding Delegate responsibilities (to focus on strategy)	Employee management Strategic growth plan
CS16	Banner and stitching	-- / Y	$.5 - 1 .5 million	N/A	N/A	Focus on core business Diversify services Access to capital Financial discipline Customer relations	Employment management Hire staff Access to capital Secure new business Marketing

ADDITIONAL INTERVIEWS (SCREENING INTERVIEWS)							
COMPANY				DIFFERENTIAL	RESILIENCY GROUPING	PARTICIPANT RESPONSES	
	Type	Minority/ Woman-Owned	Annual Revenue			Managerial Strengths	Strategic Challenges
SB17	Communication design	-- / Y	$.5 - 1 million	42.17%	1	Diversify types of clients Customer relations Focused growth plan	Secure new business
SB18	Coffee roaster	-- / --	$10 – 20 million	5.83%	1	Customer relations Build niche business Focus on core business	Control costs Differentiate from competitors
SB19	Automotive repair	-- / --	$1 – 2.5 million	60.88%	1	Customer relations Control costs Cash reserves Marketing	Hire staff Access to capital
SB20	Laser printer service and sales, shredding services	-- / --	$2.5 - 5 million	108.23%	1	Control costs Financial discipline Strategic innovation Employee management Cash reserves Customer relations Business network	Diversify (from products to services)
SB21	Custom clothing	Y / --	$.9 million	32.43%	1	Customer relations Business network Marketing Access to credit	Focus on core business Secure new contracts

COMPANY				DIFFERENTIAL	RESILIENCY GROUPING	PARTICIPANT RESPONSES	
	Type	Minority/ Woman-Owned	Annual Revenue			Managerial Strengths	Strategic Challenges
SB22	Management consulting	Y / --	Less than $.5 million	60.65%	1	Customer relations Employment management Diversify range of services	Build partnerships Strategic growth plan
SB23	Janitorial supply	-- / Y	$300,000	55.60%	2	Diversify range of services	Access to capital Secure new contracts
SB24	Environmental construction and technology	Y / --	$30 million (owner-reported)	428.33%	1	Financial discipline Control costs Strategic innovation Focused growth plan Build partnerships Core focus on business	Secure new contracts Competition Strategic growth plan
SB25	Heavy construction and metal fabrication	Y / Y	$11 million (owner-reported)	60.80%	1	Access to capital Focused growth plan	Secure new contracts Strategic innovation Diversify services Build partnerships Manage debt
SB26	Pre-clinical drug testing	Y / Y	$1.7 million (owner-reported)	N/A	N/A	Control costs Employee management	Access to capital Strategic innovation Hire staff Focused growth plan

CASE STUDY FIRMS (CSO 1-16)	SCREENED FIRMS (SB 17-26)
1. Dallas 2009 SBA e200; phone interview September 8, 2011	17. Des Moines 2009 SBA e200; phone interview August 18, 2011
2. Detroit 2009 SBA e200; phone interview September 13, 2011	18. Portland 2009 SBA e200; phone interview August 30, 2011
3. Portland 2009 SBA e200; phone interview September 24, 2011	19. Des Moines 2008 SBA e200; phone interview August 31, 2011
4. Albuquerque 2008 SBA e200; phone interview September 9, 2011	20. Des Moines 2008 SBA e200; phone interview August 30, 2011
5. Albuquerque 2008 SBA e200; phone interview August 22, 2011	21. Memphis 2008 SBA e200; phone interview August 31, 2011
6. Des Moines 2008 SBA e200; phone interview September 12, 2011	22. Milwaukee 2008 SBA e200; phone interview September 7, 2011
7. Des Moines 2008 SBA e200; phone interview September 14, 2011	23. Detroit 2009 SBA e200; phone interview September 1, 2011
8. Des Moines 2008 SBA e200; phone interview September 7, 2011	24. Detroit 2009 SBA e200; phone interview September 7, 2011
9. Memphis 2008 SBA e200; phone interview September 7, 2011	25. New Orleans 2008 SBA e200; phone interview September 20, 2011
10. Dallas 2009 SBA e200; phone interview September 9, 2011	26. Boston 2007 Interise; phone interview September 7, 2011
11. Philadelphia 2009 SBA e200; phone interview September 6, 2011	
12. Philadelphia 2009 SBA e200; phone interview September 2, 2011	
13. Philadelphia 2009 SBA e200; phone interview September 10, 2011	
14. Philadelphia 2008 SBA e200; phone interview September 9, 2011	
15. Boston 2009 Interise; in-person interview September 8, 2011	
16. Boston 2009 Interise; in-person interview September 7, 2011	

Note: The dates that the firm owner participated in the Interise small business training program and spoke to the study authors appear below.

To maintain confidentiality, the names of the businesses and business owners have been replaced with letters and numbers.

(Footnotes to Appendices)

1 Phrasing of sales and marketing questions was especially variable. See the Appendix for further results.

2 Refers to years that firm owner has operated business, not necessarily age of business.

3 Based on publicly available Manta data for 2011, unless marked with an asterisk and supplied by business owner.

4 Both the grouping framework and the differential were devised as part of the quantitative analysis.

5 Industry change between 2008-2009

6 Based on business owner's self-reported figures.

7 Based on publicly available Manta data.

8 This company is identified as CS1 in Table 6. More information is also available in Table 21 in the Appendix.

9 Based on publicly available Manta data.

10 This case study firm is identified as CS11 in Table 6, and in the Appendix

11 Based on publicly available Manta data.

12 This case study firm is identified as CS16 in the qualitative sections of the Appendix.

13 Collected from publicly available Manta data.

14 Based on self-reported data provided by the firm owner.

15 In their article entitled "How to Think Strategically in a Recession," Zook and Rigby (2001) identify the importance of supporting employees, arguing it helps to "strengthen the bonds of loyalty" that are critical to long-term business survival. They also note that employees are vital to helping a company protect its core assets during periods of market volatility.

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About Interise

Interise is a nonprofit organization that works with local, regional, and national partners to offer an advanced small business management program, including support through a network of peers and experts to facilitate greater access to new sources of capital, markets, and knowledge. The organization currently offers programs in thirty-five communities nationwide, focusing in particular on providing assistance to entrepreneurs in historically underserved communities. Since 2008, Interise has been the contracted national instructional provider for the Small Business Administration's Emerging Leaders (e200) Initiative. Interise is also committed to developing a body of research and case studies on economic development in lower-income communities. As such, it has collected longitudinal survey data for the past six years on nearly 1,200 small businesses in diverse areas of the United States. This is the first research report produced using this survey data.

More information on Interise and associated public report are available here:
www.interise.org/resiliency.

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