

ABSTRACT

POWELL, ELIZABETH ERIN. *Weathering the Gale: Toward a Theory of Entrepreneurial Resourcefulness and Resilience*. (Under the co-direction of Dr. Edward A. Baker, Jr. and Dr. Timothy G. Clapp).

In this dissertation I explore how entrepreneurs manage to hold their organizations together during difficult times and how some are able to positively adapt to create growth when facing such resource constraints. I adopt and extend traditional behavioral theories of the firm that relate performance to aspirations and highlight the importance of excess resources – organizational slack – in maintaining the firm by introducing the conceptualization of inadequate resources – negative slack – to begin the conversation around behaviors that entrepreneurs demonstrate in response to constraints. I also adopt emerging literature addressing constraints that describe “doing more with less” through resourceful behaviors such as bricolage, improvisation and bootstrapping.

Two environmental shocks have impacted the industry that is the focus of this study. Traditional textile manufacturing in the United States is an industry plagued with unfavorable conditions resulting from competition from lower wage nations with increased globalization and represents a rich context – truly the wake of a gale of creative destruction – for exploring these research questions. Another distinct shock from the environment to the firm level is the current global economic crisis, which has further increased the woes of the industry. I inductively developed grounded theory from eleven case studies to explain patterns and variations of behaviors that have enabled the survival of some firms and even the startup of others under these dire circumstances. In this dissertation, I build a theory of entrepreneurial resilience – the capacity to positively adapt under adverse conditions – that is structured around concepts that include entrepreneurs’ forms of commitment, adaptive aspirations and

resourceful behaviors. During my research, I discovered two routes to resilience: one that is more rigid, focused on “staying the course” and driven by commitments based on the founder’s sense of identity. The second route is more flexible, open to trying new values, pursuing new aspirations, demonstrating a wide range of behaviors and is shaped largely by whether or not the founder is driven by ideological commitments beyond sustaining a profit.

This theory contributes to several scholarly bodies of literature including the behavioral theories of the firm by introducing negative slack and the notion of the benefits of complex aspirations, it contributes to an emerging but understudied area of resilience among entrepreneurs under resource constraints by discovering the importance of commitment, aspirations and resourceful behaviors and finally, it contributes to the growing recognition that emotions, including but not limited to passion, play an important role in entrepreneurship.

Weathering the Gale: Toward a Theory of Entrepreneurial Resourcefulness and Resilience

by
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BIOGRAPHY

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TABLE OF CONTENTS

LIST OF TABLES	vii
LIST OF FIGURES	viii
Chapter 1: Introduction	1
Purpose of the Research	4
Significance of the Study	5
Limitations of the Study	6
Chapter 2: Literature Review	8
Behavioral theories of the firm	8
Organizational slack	9
Impact on: Innovation.	11
Impact on: Performance.	14
Impact on: Environmental Responses.	16
Impact on: Managerial Discretion.	17
Impact on: Organizational Strategy.	17
“Slack as Inefficiency”/ “Slack as Resource”	18
Resilience	20
Goals and Aspirations.....	22
Adaptive Aspirations	23
Environmental Munificence.....	25
Organizational Identity	26
Community	27
Bricolage	28
Construct Definitions: Summary.....	29
Chapter 3: Methodology.....	30
Purpose of the Research	30
Research Design	31
Research Objectives.....	33
Phase I: Case Study Development.	33

Initial Theory: Research Questions.....	35
Case Selection: Theoretical Sampling.....	37
Research Protocol: Primary and Secondary Data.....	41
Approach Protocol.....	41
Data Collection: Field Work.....	44
Primary Interviews.....	47
Direct Observations.....	49
Measurement Error.....	49
Phase II: Inductive Theory Development.....	50
Data Analysis: Within and Cross-Case.....	50
Theory Development.....	52
Theory Presentation & Enfolding the Literature: Emic & Etic protocol.....	53
Evaluating the Theory.....	55
Chapter 4: Results.....	56
Theory Presentation.....	56
Model Description.....	58
Forms of Commitment.....	59
Aspirations.....	60
Behaviors of Resourcefulness.....	62
Resilience.....	63
Resource Constraints.....	64
Overview of the Environment.....	64
Shock One: Globalization of the Textile Industry.....	64
Shock Two: Current Global Economic Crisis.....	67
Negative Slack, Firm Level.....	67
Forms of Commitment.....	71
Forms of Commitment & Aspirations.....	73
Forms of Commitment & Aspirations – Adaptive Aspirations.....	80
Behaviors of Resourcefulness.....	85

Behaviors of Resourcefulness & Boundary Conditions	87
Behavioral Boundaries: Identity.	92
Behavioral Boundaries: Ideology.	100
Behavioral Boundaries: Economic.	107
Entrepreneurial Resilience: Overall Observations.....	111
Entrepreneurial Resilience: Low.....	112
Entrepreneurial Resilience: Medium.	114
Entrepreneurial Resilience: High.....	117
Answering the Research Questions	120
Chapter 5: Contributions and Future Research.....	122
Resourcefulness & Resilience.....	123
Aspiration Complexity & Adaptation, Threat Rigidity	125
Emotional Elements, Social Entrepreneurship	127
Future Research	129
Case Study Development.....	130
Survey Methodology.....	131
Behavioral Measures	132
Investigate Multiple Industries	132
REFERENCES.....	133
APPENDICES	148
Appendix A: Organizational Slack Measures	149
Appendix B: Informed Consent Form for Research - Entrepreneurs.....	150
Appendix C: Informed Consent for Research - Employees.....	152
Appendix D: Recruitment Call Script.....	154
Appendix E: Employee Introduction Script.....	155
Appendix F: Questionnaire Guide	156

LIST OF TABLES

Table 1: Select Vocabulary and Definitions	29
Table 2: Case Study Development.....	34
Table 3: Theoretical Sample Demographic Data.....	40
Table 4: Theoretical Sample Matrix	40
Table 5: Data Collection - Interviews.....	44
Table 6: Forms of Commitment.....	59
Table 7: Behaviors of Resourcefulness.....	62
Table 8: Resilience.....	63
Table 9: Select Quotes about the Industry	66
Table 10: Forms of Commitment - Organization Level Summary.....	72
Table 11: Aspirations (Objects) of the Form - Summary	79
Table 12: Forms of Commitment & Adaptive Aspirations	84
Table 13: Behaviors of Resourcefulness - Subcategories.....	90
Table 14: Behaviors of Resourcefulness - Organization Level Summary.....	91
Table 15: Behavioral Boundaries - Identity.....	99
Table 16: Behavioral Boundaries - Ideology	106
Table 17: Behavioral Boundaries - Economic	110
Table 18: Overall Resilience.....	111
Table 19: Resilience Rating Quotes - Low.....	113
Table 20: Resilience Rating Quotes - Medium.....	116
Table 21: Resilience Rating Quotes - High	119
Table 22: Future Work - Case Study Development.....	130
Table 23: Future Work - Survey Development & Implementation	132

LIST OF FIGURES

Figure 1: Adaptive Aspirations Literature	25
Figure 2: Theory of Organizational Resilience.....	58
Figure 3: Change in Focus, horizontal change; Increase/Decrease, vertical change	61

CHAPTER 1: INTRODUCTION

Entrepreneurs face challenges in building new ventures even in stable and munificent environments (Aldrich, 1999; March & Simon, 1958; Stinchcombe, 1965); often, these challenges are exacerbated by environmental dynamics, including shocks that alter the level of environmental munificence and often destroy firms that are unable to adapt (Aldrich, 1979; Hannan & Freeman, 1984). Shocks from the environment can test a firm's resilience – its capacity for positive adaptation against adverse conditions (Sutcliffe & Vogus, 2003) – as firms grapple with challenges. The manners in which these challenges are managed have significant impact on the longevity – and viability – of the venture. One solution, the accumulation and maintenance of resources in excess of those required to simply maintain the firm typically known as organizational slack, is often adopted as a buffer against environmental instability (Cyert & March, 1963; Latham & Braun, 2009) and can protect the firm from environmental downturns (Pfeffer & Salancik, 1978; Smart & Vertinsky, 1977) and facilitate managerial discretion to resolve conflict that may arise within the firm or implement strategic initiatives (Cyert & March, 1963; Finkelstein & Hambrick, 1990).

Over time, firms may accumulate slack resources that create buffers against temporary periods of adversity (Cyert & March, 1963; Wiklund, Baker, & Shepherd, 2010). A highly munificent environment helps to generate such resources, but under more penurious circumstances firms may find it more difficult to maintain or increase the flow of resources from the environment (Aldrich, 1979; Dess & Beard, 1984). Shocks to the firm may deplete the buffers of even established and long-successful firms and new firms are unlikely to have had an opportunity to accumulate resources before any such shocks since most new ventures

begin with very limited resources (Aldrich, 1999). Even so, firms and entrepreneurs sometimes find ways to survive a variety of adverse events even without the buffers provided by slack resources.

In the United States, the textile industry has undergone a series of shocks in the competitive environment, most recently with the advent of free trade agreements over the past two decades. During this time, the opening up of free trade has been associated with devastation of the traditional US manufacturing industry as firms operating in countries with much cheaper labor and fewer environmental safeguards have drastically undercut prices. Fabric and apparel manufacturing has been particularly affected by low wage competition in part because the handling of pliable fabric has proved remarkably resistant to labor-saving technological innovation (Bureau of Labor Statistics, 2009). The industry has suffered losses of over one million jobs and over half of the traditional textile manufacturing plants in the US have closed (AMTAC, 2007). Media reports on the decline have described employment losses using terms such as “cut,” “lay-off,” “slash,” “axe” and “eliminate” and headlines such as “When the textile mill goes, so does a way of life” (Wiseman, 2010). According to Bureau of Labor Statistics employment predictions for the 2008-2018 period, the top three industry sectors expected to decline most significantly are related to traditional apparel manufacturing jobs (Occupational Outlook Handbook, 2010-2011 Edition, 2010).

The traditional US textile industry has become an environment characterized by disinvestment, declining revenues and high levels of fatalism and just giving up. Little noticed by the mass media, however, some textile manufacturing firms have managed to survive, and in the southeastern US, textile entrepreneurs are quite active. The traditional

textile industry offers a particularly interesting context in which to observe efforts towards adaptation by surviving firms and the creation and pursuit of opportunity by nascent entrepreneurs.

In addition to the industry level changes, the global economic crisis has added insult to injury – especially at the firm level. The current crisis is the second shock that has impacted the firms in this study as firms continue to experience increasing resource constraints of many kinds. Commercial financial backing for entrepreneurial ventures – new and old alike – is very limited and is therefore constraining growth – and startup – through traditional methods. Together, the shocks to the firms from changes in the environment allow me to observe the behaviors key to development of a theory of entrepreneurial resourcefulness and resilience.

In this dissertation, I adopt and extend foundational work from the so-called “behavioral theory of the firm” (Cyert & March, 1963; Mahoney, 2004) to frame the discussion and to understand the intricacies of aspirations and behaviors and the outcome of resilience. This seminal theory traces its origins back to Barnard (1938) and continues to be influential today, shaping for example, contemporary work on evolutionary economics and organizational learning (Argote & Greve, 2007). Questions about the role of resources and constraints in shaping entrepreneurial behavior and outcomes permeate the last three decades of scholarly research. Unfortunately the development of any theory of how entrepreneurs deal with constraints is currently limited by the absence of a useful theory of what constitutes a resource constraint. While most research has explored slack as some form of excess resource, as summarized earlier, I differentiate between such slack, and “negative” slack,

which I consider as *a form of inadequate resource or constraint*. This allows me to begin exploring the possibilities and limitations of theoretical symmetry between the properties and effects of positive and negative slack and provides a common construct with which to begin constructing a theory about how firms deal with negative slack under constrained conditions of the environment. The conceptualization of negative slack is a major step forward in providing a means of conceptualizing resource constraints that articulates well with important theoretical paradigms in organization studies.

Purpose of the Research

The purpose of this dissertation is to develop elements of a theory of entrepreneurial resourcefulness and resilience. I entered the study with a thorough sensitivity to existing literature around key behavioral constructs, as well as the textile industry context, and formulated two research questions to frame this inductive study. Given that some firms survive or even prosper and new firms even begin during periods of tight constraints:

RQ1: How do surviving or new entrepreneurs hold organizations together during difficult times?

RQ2: How do some entrepreneurs spring back after shocks while still operating under resource constraints?

I answer these questions and achieve the primary purpose of the research by following grounded theory methodology (Glaser & Strauss, 1967) through two research phases. Phase I consisted of building case studies of textile entrepreneurs to investigate how

and why entrepreneurial firms engage in particular behaviors in resource-constrained environments. Phase II involved extensive cross case analysis and iteration between cases and the entrepreneurship literature to inductively develop elements of a theory of entrepreneurial resourcefulness and resilience closely grounded in the case study data. These data support the elements of the theory and following the dissertation, I will test this theory in a large-scale survey designed to establish a longitudinal dataset for continued theory development.

Significance of the Study

This study has theoretical implications for surviving severe resource constraints that occur either within a low munificent environment or within the firm – or both – as well as practical implications for starting a new venture under similar constraints. The environments in both cases – for survivors and startups – are turbulent and establishing a trajectory for not just survival, but for maintaining aspirations and gaining traction toward performance improvement can be extremely difficult. For a number of reasons, far more firms give up than actually persevere.

Perhaps the most substantial practical implication to consider is applying this theory for teaching entrepreneurship students about both the importance of resourcefulness and the achievement of resilience and the values and behaviors that are central to these approaches. Most entrepreneurial firms are formed under substantial resource constraints (Aldrich, 1999) and resourcefulness and resilience are commonplace requirements for survival and flourishing. Preparation for resisting shocks and positively adapting to circumstances should therefore become an issue in the curriculum development.

This study is intended to support contributions to a number of important streams of the organizations and entrepreneurship literature, including the broad swatch of behavioral studies. Although the behavioral theory of the firm provides rich theory for my research, it cannot be extended in a straightforward way to conditions of negative slack. For example, the theory suggests that positive slack is central to managerial discretion and to the maintenance of aspirations during difficult periods. A straightforward extension suggests that negative slack allows no discretion and creates a downward spiral of low aspirations. I have found, however, patterns through which entrepreneurs and managers create discretion and increase aspirations in the face of negative slack.

This dissertation continues with a review of the literature in Chapter 2, descriptions of the methodology I followed in Chapter 3, the presentation of the results of this study – elements of a theory of entrepreneurial resourcefulness and resilience – in Chapter 4, and finally, additional contributions beyond negative slack are elaborated upon in Chapter 5 along with subsequent research plans to complement the results of this dissertation.

Limitations of the Study

There are two limitations of this study. First, while theoretical saturation is the goal of case study development, this is reached “when possible” (Eisenhardt & Graebner, 2007). I interviewed multiple stakeholders of each organization, however additional interviews may add further insight to the discoveries that emerged most recently and are included for future work. This would embrace investigating entrepreneurial passion and further evaluating the role of identity and commitment in determining overall resilience through this lens. The

results of further exploring these notions will likely increase the depth of the theory presented in this dissertation.

Second, testing the theory of entrepreneurial resourceful and resilience still remains. This is also included as the next step of the research following the dissertation. Developing measures and a survey for the first round of data collection is underway. Measuring the use of behaviors as well as establishing measures for changes in focus and levels of aspirations is also important. The plan is to establish the survey as the basis for a longitudinal study of the theory over time, which will also add depth to the theory presented in this dissertation. That said, the limitations are simply the next steps for future work.

CHAPTER 2: LITERATURE REVIEW

Behavioral theories of the firm

I adopt and extend foundational work from the so-called “behavioral theory of the firm” (Cyert & March, 1963; Mahoney, 2004) to frame this dissertation and understand the intricacies of aspirations and behaviors under constraints. This seminal theory traces its origins back to Barnard (1938) and continues to be influential today (Argote & Greve, 2007), shaping for example, contemporary work on evolutionary economics and organizational learning. The behavioral theories of the firm challenged primary assumptions of the neoclassical theory of the firm, which were based only on the goal of profit maximization assuming operation with perfect knowledge. The behavioral theories of the firm and particularly Cyert & March (1963) was one of the first theories to open the economist’s “black box” of the firm and to treat it not as one operating unit, but as an intricate system with interactive policies and, more importantly, people with multiple goals. The theory recognized that people within the organization behave differently depending upon allocation of resources, development of organizational aspirations and methods by which to resolve challenges.

While the original theory was intended to apply to behaviors of “contemporary” large, complex organizations to understand decision-making processes – characterized by resources in excess of those required to maintain the coalition (organizational slack), I recognize that the modal “contemporary” firm is neither singularly large nor likely to possess excess resources. Organizations operating in less munificent environments or with paltry endowments may behave differently than those operating under conditions of plenty. Given

that most entrepreneurs begin their ventures with very limited resources (Aldrich, 1999), it is interesting that to date, no theory of entrepreneurial resourcefulness – or resilience – has been generated. Therefore, a theory of processes and behaviors by which organizations perform in resource-constrained environments is a significant complement to the original behavioral theory of the firm. Following the tenants of grounded theory development, I entered this study sensitized to existing theory. Here, I summarize the literature around which the study was originally framed and review pieces of the literature towards which my discoveries through field studies focused. I conclude this chapter with definitions I adopted for the study.

Organizational slack

All studies included in this review of organizational slack examine resources in excess of the minimum required for the particular phenomena of interest, implying the presence of positive slack. Resource constraints have been mentioned, but without an identified method of generating needed resources or overcoming such constraints. Removing something that exists to “free up” resources appears to be the method used to solve the constraint issue (i.e., downsizing, liquidation, etc). Cyert & March’s (1963) definition explains slack and some of its implications and manifestations:

“...(the) difference between total resources and total necessary payments is what we have called *organizational slack*. Slack consists in payment to members of the coalition in excess of what is required to maintain the organization.” (p. 36)

Further, many forms of slack typically exist:

- stockholders are paid dividends in excess of those required to keep stockholders (or banks) within the organization,
- prices set lower than necessary to maintain adequate income from buyers,
- wages in excess of those required to maintain labor,

- executives are provided with services and personal luxuries in excess of those required to keep them,
- subunits are permitted to grow without real concern for the relation between additional payments and additional revenue, and
- public services are provided in excess of those required. (p. 37)
 ...a cushion provided by organizational slack permits firms to survive in the face of adversity...Organizational slack absorbs a substantial share of the potential variability in the firm's environment. As a result, it plays both a stabilizing and adapting role. Slack arises from the bargaining and decision process...without conscious intent on the part of the coalition members to provide stability to the organization. (p. 38)

A “working definition” that later emerged included a great deal of influence from James March, as well as a synthesis of prior definitions from Child (1972), Cohen, March and Olsen (1972), Dimick and Murray (1978), among others, and is one of the most cited definitions of organizational slack:

Organizational slack is that cushion of actual or potential resources which allows an organization to adapt successfully to internal pressures for adjustment or to external pressures for change in policy, as well as to initiate changes in strategy with respect to the external environment. (Bourgeois, 1981, p. 30)

Organizational resources vary with respect to the methods by which they originate, accumulate, and are stored, accessed and retrieved for eventual use. Resources can be used for internal operations of the firm and to respond to external environmental conditions. A considerable amount of research has been generated around organizational slack over the past few decades. In a seminal work in economics literature, Cyert and March (1963) stated that, as is often the case, many interesting things occur when organizational slack is not zero, and

resources in excess of those required to maintain an organization are broadly categorized as slack.

Much progress has been made towards building a solid body of organizational slack literature. However, there has not been complete convergence regarding construct development, measurement, and solutions to tensions emerging from theoretical and empirical discourse, as shown in Appendix A. Although concerns have been raised about the convergence of nomenclature and features of the calculations of each type of slack, each study did justify their calculations (for the most part) and the terminology can be cross-validated with the explained measures in Appendix A. Therefore, the names of the constructs were considered for the purpose of grouping the empirical studies by dependent variables because, in general, most of the naming is consistent with calculations. Variations in measurements were not considered in this review.

Most research at least agrees that organizational slack is a useful concept and that it does have an impact on important features of the firm. Among other outcomes, many studies have tied organizational slack to innovation, performance, environmental responses, managerial influences, and the development of organizational strategies. The “*slack as efficiency/slack as resource*” is a source of continuing debate.

Impact on: Innovation.

Researchers of organizational slack have measured several different categories of slack and types of resources to understand the relationship between slack and innovation. Traditional organization theory proposed that slack enables innovation (Cyert & March, 1963) and promotes new product development and new market entry (Hambrick & Snow,

1977). The subsequent research begins to explain the association between slack and innovation by the allocation within the firm, coping during organizational downsizing, intensity of research and development, and responsible usage as too much slack or too little slack may counter innovation efforts.

The way that resources are allocated within the firm is very important for innovation. One study proposed that slack resources intended for innovation should be designated as such, rather than existing as “available” (Dougherty & Hardy, 1996) and without a clearly intended use. Otherwise, the slack may be used for other activities. In their study of innovation in large firms it became apparent that access to “available” resources required innovation in itself as “innovators called on acquaintances developed during a lifetime with the firm and used position and location to beg, borrow, or steal resources” (Dougherty & Hardy, 1996). Another study found that slack enables innovation in firms that are not solely focused on profits; economically oriented firms were found to avoid financial risks associated with innovation (Rosner, 1968). Damanpour (1987) found that organizational slack had a greater impact on technological innovation than on ancillary or managerial innovation. In cases of manufacturing, research and development was found to be intensified by slack (Greve, 2003).

Different types of slack, which described the relative liquidity of each resource, have been explored for variations in impacts on innovation. Absorbed, generic resources were shown to increase exploitation (continuing day-to-day routines) and decrease exploration (innovation), where the opposite was true for unabsorbed, generic and rare resources (Voss, Sirdeshmukh, & Voss, 2008). Voss and colleagues (2008) also found that the latter is true

only when the perceived environmental threat is high. Two meta-analyses published in sequential years found interesting results between slack resources, innovation, and the size of the firm. Damanpour (1991) found a weak relationship between slack resources and its impact on innovation (he did not distinguish between absorbed and unabsorbed slack and mentioned this as a caveat to his findings). However, in the next study, he found a positive relationship between size and innovation, where slack resources may be associated with firm size (Damanpour, 1992). In another study, size was also found to be a very strong predictor of innovation, but “only insofar as it implies the presence of motivation, obstacles and resources” (Mohr, 1969). He cautions to consider dimensions where “innovation is a multiplicative function of the motivation to innovate and the balance between the obstacles and resources available for innovation” (Mohr, 1969, p. 126).

Love and Nohria (2005) found that “downsizings are more likely to lead to improved performance when firms have high slack, when their scope of the downsizing is broad, and when the downsizing is done proactively” (p. 1087). This allows a firm to selectively remove positions across the organization to better position the firm instead of being forced to cut without planning if environment required such changes. Further, in a study of human capital resource slack, Mellahi and Wilkinson (2010) found that the rate of patenting activity declined only slightly for a temporary time after downsizing and small downsizing had a vaguely positive effect on patenting activity; however, they found a long-term negative effect on innovation activity in the case of large downsizing.

Finally, the type and level of innovation and slack vary according to the firm and intended use of each. Optimistically, slack resources have been found to spur innovation that

otherwise would not have been possible (Cyert & March, 1963; Dimick & Murray, 1987), but an optimal level may be what activates innovation (e.g. Nohria & Gulati, 1996).

Impact on: Performance.

In the same way that slack resources do not always result in innovation, and because performance and innovation are closely related, slack resources do not have an absolute positive relationship with performance. Slack resources do not always promote growth, but the characteristics of the slack resources in use will determine the relationship to performance (Mishina, Pollock, & Porac, 2004). They found that “human resource slack enhances short-term market expansion, but slows down short-term product expansion” (Mishina, Pollock, & Porac, 2004, p. 1179). Even though two firms may have the same resources, the demands on those resources matter (Mishina, Pollock, & Porac, 2004).

Several interesting relationships have been found between types of slack and performance. Performance was positively and linearly related to increases in high-discretionary slack although performance increased and then decreased in low-discretionary slack; therefore, “specific forms of slack may have decreasing returns, depending on the level of discretion that the slack provides managers, and that redeployment of large amounts of low-discretion slack can be counterproductive” (George, 2005, p. 672). Although George (2005) explored resource constraints and the impacts on performance, he advised continued research into this question. During institutional transitions – bringing about resource scarcity and environmental dynamism – unabsorbed slack was shown to have a positive relationship with performance and is critical for firms to sustain a competitive advantage (Su, Xie & Li,

2009). A purely positive relationship was reported in a meta-analysis of the relationship between slack and performance (Daniel, Lohrke, Fornaciari, & Turner, 2004).

Risk and performance studies involving organizational slack are quite complex. Bromiley (1991) found slack appeared to reduce risk taking and that available and potential slack increased performance. In another study, he and a colleague again found that recoverable slack reduced performance, available and potential slack positively influenced performance and that potential slack positively influenced risk (low levels of slack increased risk taking) (Wiseman & Bromiley, 1996). Singh (1986) found that good performance is related to both low risk taking and high absorbed and unabsorbed slack; the study also found that poor performance is related to high risk taking and other findings reinforces the importance of distinctly conceptualizing absorbed versus unabsorbed slack. Palmer and Wiseman (1999) found that a firm's overall financial health may alter a manager's risk preferences and therefore riskier alternatives will be explored due to low levels of slack resources. Miller and Leiblein (1996) found that "the primary role of slack is to facilitate organizational responses to downside risk, thus improving subsequent performance" (p. 115). Deephouse and Wiseman (2000) found that slack acts as a buffer where "recoverable slack allows a firm to postpone taking risky chances during turbulent periods" (p. 477).

The manner by which firms choose to use slack for performance varies. In one study, the equity-to-debt ratio was found to be an indicator of future performance as firms that eventually failed exhibited lower ratios as far as ten years prior to failure compared to surviving firms (Hambrick & D'Aveni, 1988). Firms may consider unabsorbed slack as a buffer and sense little pressure to respond to changes as unabsorbed slack and response

likelihood were found to have a negative relationship (Smith, Grimm, Gannon, & Chen, 1991). Alternately, firms may invest absorbed slack into resources that help them respond quickly when absorbed slack and response lag had a negative relationship in the same example (Smith et al., 1991). High levels of slack also provide the resources for action and Ferrier (2001) found that slack was positively related to the volume and duration of competitive aggressiveness.

Impact on: Environmental Responses.

An organization's ability to respond to changes in its environment is impacted by slack resources. During a physician's strike, Meyer (1982) found that slack better helped the organizations respond to the jolt rather than anticipate or later readjust from it. Additionally, in times of environmental strife, another study found that firms should pursue acquisitions more aggressively rather than prior to or after the jolt and slack enables that action (Wan & Yiu, 2009). It was also proposed that managers should move quickly at the onset of an economic downturn to increase available slack (liquidating absorbed slack) and should incorporate measures for signals of change to economic downturn for future use (Latham & Braun, 2009).

A firm's response to environmental changes is contingent upon its resource allocation pattern (Cheng & Kesner, 1997). Organizational slack can allow a firm to successfully withstand economic recessions by transferring slack resources to smooth short-term disturbances (Latham & Braun, 2009). Also, firms with greater slack were found to be able to withstand environmental downturns (Hambrick & D'Aveni, 1988) because one option is that

slack can insulate the technical core of a firm from environmental turmoil (Pfeffer & Salancik, 1978; Smart & Vertinsky, 1977; Thompson, 1967).

Impact on: Managerial Discretion.

Slack has been demonstrated to impact managerial discretion, interpretation, and learning situations. Positively, slack resources were shown to enhance managerial discretion (Finkelstein & Hambrick, 1990). Additionally, studies found that the resource allocation patterns dictate a firm's environmental response (Cheng & Kesner, 1997) and discretionary slack mediates managerial perceptions of the environment's amenability to corporate entrepreneurship, which is a decision about resource allocation (Simsek, Viega, & Lubatkin, 2007). Environmental issues were interpreted as opportunities when discretionary slack was available to managers (Sharma, 2000). Alternatively, managers may make more conservative decisions based on perceived low levels of slack resources (Bateman & Zeithaml, 1989). Finally, the presence of slack may enable managers to learn how to manage the resources available to them for processes of change (Geppert, 1996).

Impact on: Organizational Strategy.

Organizational strategies have been found to be significantly influenced by slack resources - slack resources in moderation, that is. Adding liquid slack can assist in exploiting an unexpected opportunity; however adding redundant slack is counterproductive to flexibility (Evans, 1991). High cash flow can make a firm attractive for take-over because it may signal that the firm is subject to agency theory (act for the good of the manager's gain) and because newly acquired cash can pay off debt financing to fund the takeover (Davis & Stout, 2002). One study showed that "having a chief financial officer, greater size, and

greater organizational slack increased the risk of takeover” (Davis & Stout, 2002, p. 605). In an interesting study of “excellent” versus “non-excellent” firms, results showed that a well managed firm simultaneously pursues adaptive generalization (exploitation) and adaptive specialization (investment of slack) (Chakravarthy, 1986).

Changes in organizational structures are also affected by slack resources. Iyer and Miller (2008) recently found that absorbed slack is irrelevant to undertaking acquisitions. The findings also showed that, compared to higher performing firms, a firm’s propensity to engage in acquisitions may be increased due to not meeting performance aspirations (Iyer & Miller, 2008). In a study of how organizational slack was managed in firms with multiple divisions, results showed that firms were able to manage absorbed slack (it was decreased) in vertically integrated, related firms and unabsorbed slack (also decreased) with unrelated diversified firms when implementing a multi-divisional structure (Riahi-Belkaoui, 1998). Large commitments of fixed costs, such as HR management systems, and new efforts of change can be supported during periods of “economically bountiful times” (Dimick & Murray, 1987, p. 623).

“Slack as Inefficiency”/ “Slack as Resource”.

Originally, organizational theorists argued that slack served multiple positive purposes for the firm’s operations (Cyert & March, 1963). However, the agency theory perspective purports that it can give confidence to inefficiency and squandering by users (Jensen & Meckling, 1976; Jensen, 1986), promote satisficing behavior (Simon, 1957), and breed complacency and reduce discipline in innovation contexts (Nohria & Gulati, 1996). Slack resources may be squandered away in times of “excessive entrepreneurialism” and

should therefore be avoided for maximum innovation; however, “excessive conservatism” should be also avoided to maximize innovation (Miller & Friesen, 1982). Tan and Peng (2003) integrated separate constructs of slack into the argument by determining that unabsorbed slack associates more strongly with organization theory predictions (positive firm performance) and absorbed slack associates more strongly with agency theory predictions (negative firm performance).

However, the classic debate in the slack literature is evolving from whether slack is beneficial or detrimental to an organization in determining the correct amount of slack to hold in an organization and has the potential to be resolved in future studies. Bourgeois (1981) first contributed a theoretical hypothesis of the inverse U-shape relationship. Nohria and Gulati (1996) presented the first explanation of underlying mechanisms of the inverse U-shape, which helps to resolve the debate between encouraging or inhibiting innovation. Following this lead, several scholars have integrated the separate pieces of the slack construct into the equation (e.g. Tan & Peng, 2003). Geiger and Cashen (2002) further explored this relationship with innovation through a multidimensional perspective – delineating internal slack or external slack and confirmed the inverted U-shape relationship between available/recoverable slack and innovation – and found that in both cases firms can find an optimal curvilinear relationship between slack and innovation and firms with lower debt (higher potential slack) tend to display greater innovation. The inverse U-shape relationship was further confirmed between discretionary slack and performance; however performance was positively, linearly related to increases in high-discretionary slack (George, 2005). Love and Nohria (2005) also found an inverse U-shape relationship between slack and

performance. Finally, understanding the antecedents of different types of slack resources and thus differentiating them in studies – such as high-discretion slack and low-discretionary slack – was found to be important for identifying the optimal level of slack (Sharfman, Wolf, Chase, & Tansik, 1988).

Resilience

Resilience has long been studied at the individual level and particularly in the childhood psychology literature in response to high-risk conditions (e.g., Garmezy, 1991; Masten, Best, & Garmezy, 1990). Coutu (2002) summarizes this context from the work of others and says that a resilient person does three things when faced with disaster: faces down reality with a more pessimistic perspective than optimistic, searches for meaning for themselves and others, and is able to improvise or use bricolage under certain circumstances. Yet, much work still remains for reconciling the construct and understanding its applications and implications for scientific discovery (Luther, Cicchetti, & Becker, 2000).

Much less work has focused at the organization level (Sutcliffe & Vogus, 2003). Work in this area has focused on preparation for rare events, (Christianson, Farkas, Sutcliffe, & Weick, 2009), reactions to surprises and unexpected events (Weick & Sutcliffe, 2001) such as terrorist attacks on the US airline industry (Gittell, Cameron, Lim, & Rivas, 2006), the World Trade Center buildings in New York (Tierney, 2003) or United Airlines Flight 93 (Quinn & Worline, 2008). Weick, Sutcliffe, & Obstfeld (1999) describe five processes for organizing for high reliability and Weick & Sutcliffe (2006) further suggest that as one of those processes, “commitment to resilience is about stability as a goal and vividness as the means to achieve it; to bounce back from disruption involves vivid attention to whatever is at

hand in an effort to ascertain how it can be cobbled together in order to resume whatever was interrupted (this is Levinthal and Rerup's 2006 notion of recombination)" (p. 519). In addition, some research has offered that "resilience capacity" involves developing a broad and complex array of routines, which are the set of options for adapting to change and uncertainty (Lengnick-Hall & Beck, 2005).

Vogus and Sutcliffe (2007) suggest, however, that organizational resilience has yet to be measured to any great extent in the literature: "given the dearth of empirical work exploring resilience in organization theory, many (if not all) avenues are open for future research in resilience" (p. 3420). They outline a research agenda for understanding the role of resources and understanding behaviors for positively adapting from adverse events and define resilience as, "the maintenance of positive adjustment under challenging conditions such that the organization emerges from those conditions strengthened and more resourceful" (2007:3418). In the manuscript, they suggest that "slack resources are fundamental to our definition of resilience" (Vogus & Sutcliffe, 2007: 3420). Marcus & Nichols (1999) describe how declining supply of resources – in efforts to increase efficiency – may actually contribute to causing disasters (by eliminating processes or positions that would normally enhance safety) and promote reactionary rather than anticipatory responses regarding safety situations (when it is too late to prevent the disaster). However, Goerner, Leitaer, and Ulanowicz (2009) offer that resilience and efficiency are both necessary and complementary, which is very similar to the slack as a resource or an inefficiency: a curvilinear relationship – and tradeoff – is suggested as optimal for creating an economically sustainable organization.

A few studies have contributed to understanding resilience in entrepreneurship at the individual level. One resource that was found to contribute to hanging on despite poor performance was human capital and that the entrepreneur's threshold of performance was found to be a likely determining factor of survival (Gimeno, Folta, Cooper, & Woo, 1997). Another resource, personal financial capital, was found to be a significant factor for determining the entrepreneurs who were able to survive longer than those with significant liquidity constraints (Holtz-Eakin, Joulfaian, & Rosen, 1994). Additionally in the entrepreneurship literature, rebounding from venture failure to continue as a serial entrepreneur was attributed to the development of emotional, cognitive, social and financial resilience – explored through the broaden-and-build theory (Fredrickson, 2001) – rather than simply the entrepreneur's own self-confidence for starting a new venture after failure (Hayward, Forster, Sarasvathy, & Fredrickson, 2010).

Goals and Aspirations

In 1958, March and Simon explored the notion of satisfaction related to goals and aspiration levels. Cited by several later authors, the aspiration level becomes a reference point that simplifies the performance evaluation that dichotomizes a continuous performance measurement into discrete successes or failures (e.g., Baum, Rowley, Shipilov, & Chuang, 2005; Greve, 1998; Baum & Dahlin, 2007, Harris & Bromiley, 2007).

The most important proposition is that, over time, the aspiration level tends to adjust to the level of achievement. That is to say, the level of satisfactory performance is likely to be very close to the actually achieved level of recent performance. When the situation is in a "steady state" over some period of time, aspiration levels do not remain absolutely constant but tend to rise slowly. Hence, even in the absence of environmental change, there is a continuous mild

pressure toward innovation and change of program. Although past achievement provides a primary basis for adjusting aspirations to the achievable (or that which was thought to be achievable), other bases of comparison are used as well. Individuals adjust their criteria to the achieved levels of other individuals with whom they compare themselves, and to the levels that are established as norms by relevant reference groups. Organizations adjust their criteria to the levels achieved by other organizations. (March & Simon, 1958, p. 182-183)

The next elaborate definition of aspirations levels appeared in A Behavioral Theory of the Firm related to goals, expectations, and choices within the firm. Cyert and March (1963) asserted that aspiration levels are determined by both social and historical comparisons:

“The aspiration level is viewed as some weighted function of these three variables: organization's past goal, the organization's past performance, and the past performance of other "comparable" organizations.” (p. 115)

Gaps can be found between performance and aspiration levels, which may further drive the adaptation of aspirations in addition to the historical and social comparisons. Gaps are:

...a set of assumptions that require that current aspiration be an optimistic extrapolation of past achievement and past aspiration...1. In the steady state, aspiration level exceeds achievement by a small amount, 2. Where achievement increases at an increasing rate, aspiration level will exhibit short-run lags behind achievement. 3. Where achievement decreases, aspiration level will be above achievement. (Cyert & March, 1963, p. 34)

Adaptive Aspirations

I developed **Figure 1** by following the given definitions to illustrate the adaptive aspirations construct. As shown, aspirations, or goals, may be established by either historical

(within firm comparisons) or social (external comparisons) benchmarks. The aspiration level may also shift based on those referents (Greve, 2008). Historical comparisons may be based on a firm's prior goal or a firm's prior performance and may depend on individual performance evaluation assessments (Greve, 2002). External comparisons can be related to another firm's performance or related to an overall industry evaluation (peer group) (Baum et al., 2005). A "community effect" has been found to significantly reiterate the importance of the social context (Knudsen, 2008).

Continuing to explain **Figure 1**, an expectation level exceeds the aspiration level of a firm where this "expected" performance is a calculated forecast of actual performance. The difference between actual performance (expectation) and the aspiration level indicates the attainment discrepancy (Lant, 1992; Palmer & Wiseman, 1999). A positive attainment discrepancy indicates performance (expectation) falling short of the aspiration level and a negative attainment discrepancy indicates performance (expectation) exceeding the aspiration level. A second reference point indicates a "Survival Reference Point"; the "shifting focus" behavior of firms between the aspiration level and this survival point changes according to performance of the firm (March & Shapira, 1987).

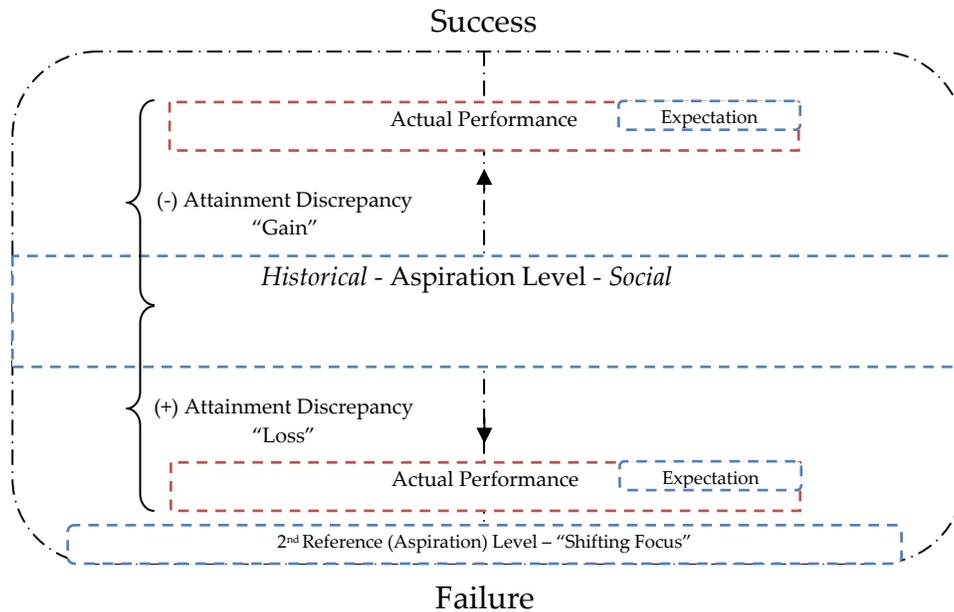


Figure 1: Adaptive Aspirations Literature

*Beginning in the center of **Figure 1**, an aspiration level may be historical or social. The aspiration level slightly exceeds the expected actual performance (forecast). The difference between the aspiration level and the actual performance is an attainment discrepancy (AD). Negative AD indicates a “gain” and positive AD indicates a “loss.” Each direction can impact an adaptation in future aspirations and expectations.*

Environmental Munificence

Following the lead of March and Simon (1958) and Cyert and March (1963) for building environmental munificence into a theory of organizational behaviors (i.e., resolving conflict within the firm), Staw and Sz wajkowski (1975) were one of the first to further investigate the impact of environmental munificence upon a firm’s interaction with the environment for procuring resources. They found support for their hypotheses that firms

operating in less munificent environments – under constraints – may engage in illegal activities and trade violations to obtain critical resources. Dess & Beard (1984) explored operationalizing environmental munificence, dynamism and complexity to understand resource transactions between organizations and their environment.

Recent work has examined the slack-performance relationship within the context of changing and constrained environments and found that organizational slack, and particularly financial slack is quite important for manufacturing firms in environments of low munificence (Bradley, Shepherd, & Wiklund, 2011).

Organizational Identity

Albert & Whetten (1985) delineated the construct of organizational identity. With the proliferation of studies and interpretations of the meaning of organizational identity, I use the follow-up article as the premise for this research. Whetten (2006) writes:

The concept of organizational identity is specified as the central and enduring attributes of an organization that distinguish it from other organizations. I refer to these as organizational identity claims, or referents, signifying an organization's self-determined (and "self"-defining) unique social space and reflected in its unique pattern of binding commitments. In practice, CED [central, enduring and distinctive] attributes function as organizational identity referents for members when they are acting or speaking on behalf of their organization, and they are most likely to be invoked in organizational discourse when member agents are grappling with profound, fork-in-the-road, choices – those that have the potential to alter the collective understanding of "who we are as an organization." In these settings and for these purposes, identity claims are likely to be represented as categorical imperatives – what the organization must do to avoid acting out of character. (p. 220-221)

Later, Whetten (2006) continues by describing when organizational identity is likely to matter:

Organizational identity is, thus, a blunt decision aid – it is of little value in making routine or incremental decisions, but it is indispensable for most fork-in-the-road choices, especially when a contemplated course of action might be considered out-of-character by a legitimating audience. (p. 226)

Community

A community of practice is typically an organically created group in a large organization that consists of people who share a common interest, and most generally the work they do within the organization: significant learning and innovation take place in these communities which are seen as a “work-around” (“noncanonical practices”) to formal procedures (“canonical practices”) that may hinder productivity (Brown & Duguid, 1991). Lave and Wenger’s (1991) situated learning theory suggests that individuals participating in a community of practice can develop the practices of the community. Communities of practice are often seen as groups quickly solving problems, creating best practices and starting new lines of business – developing capabilities and exchanging knowledge (Wenger & Snyder, 2000). In addition, in a full review of the development of a “sense of community”, McMillan and Chavis (1986) described four elements: membership is a feeling of belonging, influence is a sense of making a difference, integration and fulfillment of needs by members of the group and a shared emotional connection which is “the commitment and belief that members have shared and will share history, common places, time together and similar experiences” (p. 9). In entrepreneurship, research is emerging regarding a “community-based enterprise” as a strategy for sustainable development in very poor populations (Paredo &

Chrisman, 2004). However in this study, I use a more general definition of community that still respects the different types of communities, applications and purposes, shown in Table 1.

Bricolage

Baker & Nelson (2005) define entrepreneurial bricolage as “making do by applying combinations of the resources at hand to new problems and opportunities” (p. 333). They provide a thorough review of the bricolage literature in this article. Others have started to measure bricolage and its impact on various outcomes of the firm, including innovation (e.g., Senyard, Baker, & Davidsson, 2009). Recently, a specific form of bricolage has emerged: human capital bricolage (Banerjee & Campbell, 2009). Baker, Pollock, and Sapienza (2010) put forth a definition that describes it as “making do by applying combinations of the human capital resources at hand.”

Construct Definitions: Summary

Table 1 is a brief list of the critical vocabulary and constructs I use to build the theory in this dissertation.

Table 1: Select Vocabulary and Definitions

Term	Definition	Source
Aspiration	a strong desire to achieve something high or great; a goal	Dictionary.com
Aspiration Level	determined by social and historical comparison	Cyert & March (1963); March & Simon (1958)
Bootstrapping	launching (and managing) ventures with modest personal funds	Bhide (1992)
Bricolage	making do by applying combinations of the resources at hand to new problems and opportunities	Baker & Nelson (2005)
Environmental jolt or shock	a sudden or unprecedented event; transient perturbations whose impacts on organizations are disruptive	Meyer (1982)
Commitment	a pledge, promise, or obligation that restricts one freedom of action	Dictionary.com
Community	a social, religious, occupational, or other group sharing common characteristics or interests and perceived or perceiving itself as distinct in some respect from the larger society in which it exists	Dictionary.com
Environmental munificence	capacity; extent to which the environment can support sustained growth	Dess & Beard (1984); Starbuck (1976)
Identity (personal, organizational)	“who I am”, collectively “who we are”	Albert & Whetten (1985); Fiol (1991)
Ideology	a set of beliefs about the social world and how it operates, containing segments about the rightness of certain social arrangements and what action would be undertaken in the light of those statements.	Wilson (1973) quoted in Pettigrew (1979)
Instrumental	serving or acting as a means or influence; useful	Dictionary.com
Negative slack	inadequate resource or constraint	<i>New definition</i>
Organizational slack	difference between total resources and resources required to maintain the organization; excess resources	Cyert & March (1963)
Resilience	capacity for positive adaptation under adverse conditions	Vogus & Sutcliffe (2003)
Resourcefulness	patterned variations in making use of limited resources	<i>New definition</i>
Thrift	economical management; frugality	Dictionary.com

CHAPTER 3: METHODOLOGY

Purpose of the Research

The purpose of this dissertation is to develop elements of a theory of entrepreneurial resourcefulness and resilience. Traditionally and over time, firms may accumulate slack resources that create buffers against temporary periods of adversity (Wiklund, Baker, & Shepherd, 2010). A highly munificent environment helps to generate such resources by which firms may operate, but under more penurious circumstances firms may find it more difficult to maintain or increase the flow of resources from the environment (Aldrich, 1979; Dess & Beard, 1984). The nature of the US textile industry has changed dramatically in the past two decades and the domestic traditional fabric and apparel manufacturing environment is plagued with challenges. Combined with the current global economic crisis, this is a suitable context for pursuing answers to the two research questions in this two-phased study:

RQ1: How do surviving or new entrepreneurs hold organizations together during difficult times?

RQ2: How do some entrepreneurs spring back after shocks while still operating under resource constraints?

I answer these questions by following grounded theory methodology (Glaser & Strauss, 1967), which is appropriate for exploring the contextual implications of these questions. Phase I consisted of building case studies of textile entrepreneurs to investigate how and why entrepreneurial firms engage in particular behaviors in resource-constrained

environments. Phase II involved extensive cross case analysis and iteration between cases and the entrepreneurship literature to inductively develop elements of a theory of entrepreneurial resourcefulness and resilience grounded in case study data. Following the dissertation, I will test this theory in a large-scale survey designed to establish a longitudinal dataset for continued theory development.

Research Design

This study was divided into two research phases, each which called for multiple steps. During phase one, I generated 14 case studies of entrepreneurs in North Carolina operating in the textile fabric and apparel traditional manufacturing industry. Throughout phase two, I conducted cross-case analyses of the case studies (Eisenhardt, 1989; Yin, 2009) and inductively generated elements of theory derived directly from the data (Glaser & Strauss, 1967; Strauss & Corbin, 1998). The results of these phases clearly define elements of a theory of entrepreneurial resourcefulness and resilience.

Both phases of the research follow qualitative methodology, utilizing a series of probing questions and unobtrusive observations to develop a theory about behaviors of entrepreneurs and organizations surviving and starting up under resource constraints. This is the most appropriate methodology for exploring the research questions due to the lack of established literature on these topics and the nature of the research questions that inquires about how and why behaviors occur. Qualitative research is interpreted in multiple ways among both *researchers* in various fields and *consumers* of the research. A definition is offered by Denzin and Lincoln (2005):

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self...Accordingly, qualitative researchers deploy a wide range of interconnected interpretive practices, hoping always to get a better understanding of the subject matter at hand...there is frequently a commitment to using more than one interpretive practice in any study. (p. 3-4)

In qualitative research, some data may be quantified, such as background information about individuals or objects being studied, but a majority of the analysis is interpretive (Strauss & Corbin, 1998). Qualitative researchers “see the world in action... [and] are more likely to confront and come up against the constraints of the everyday social world” (Denzin & Lincoln, 2005, p. 12). Additionally, actively collecting data and developing theory using qualitative methodology creates and hones several skill sets of the researcher: critical analysis of situations, objective recognition of tendencies toward bias, sensitivity to words and actions of respondent, problem-solving in the field, and acceptance of self as a research instrument (Corbin & Strauss, 2008; Strauss & Corbin, 1998).

As described in Strauss and Corbin (1998), grounded theory methodology was originally developed by sociologists Barney Glaser and Anselm Strauss (Glaser, 1978, 1992; Glaser & Strauss, 1967; Strauss, 1987). The methodology is one approach to qualitative research and produces theory that is “derived from data, systematically gathered and analyzed through the research process...data collection, analysis, and eventual theory stand in close relationship to one another” (Strauss & Corbin, 1998, p. 12). Grounded theory begins with a firm grasp of the existing literature to facilitate exploration and discovery of new

contributions to the existing base (Suddaby, 2006). This research is grounded in behavioral theories of the firm, and specifically Cyert and March (1963), with specific emphasis on organizational slack and aspirations and behaviors associated with each.

“Researchers using grounded theory are less focused on subjective experiences of individual actors per se and are instead more attentive to how such subjective experiences can be abstracted into theoretical statements about causal relations between actors.”
(Suddaby, 2006, p. 635)

Research Objectives

This research followed two phases to generate the theory of entrepreneurial resourcefulness and resilience. While phases one and two are linked together under case study and grounded theory development, I have separated the data gathering process from the data analysis stage. Therefore,

Phase one: Build case studies of textile entrepreneurs to investigate how and why entrepreneurial firms engage in particular behaviors in resource-constrained environments.

Phase two: Inductively develop elements of a theory of entrepreneurial resourcefulness and resilience based on the findings in the case studies.

Phase I: Case Study Development.

Phase one of the research integrates fundamental and complementary methodologies for building theory from case studies. This study followed Table 2, my own synthesis of the methodologies of the premier scholars in the field, to generate the foundation for inductively developing the elements of a theory of organizational resilience. Following the inductive process is “one of the best, if not the best, of the bridges from rich qualitative evidence to mainstream deductive research. Its emphasis on developing constructs, measures, and

testable theoretical propositions makes inductive case study research consistent with the emphasis on testable theory within mainstream deductive research” (Eisenhardt & Graebner, 2007, p. 25). Building theory from case studies is “highly iterative and tightly linked to data...The resultant theory is often novel, testable, and empirically valid” (Eisenhardt, 1989, p. 532).

Table 2: Case Study Development

Study Phase	Process Stage	Activity	Author
Phase I	Initial Theory	Definition of the Research Question/a priori constructs	Eisenhardt (1989); Yin (2009)
	Case Selection	Specified population/ Theoretical sampling	Eisenhardt (1989); Eisenhardt & Graebner (2007); Strauss & Corbin (1998)
	Research Protocol: Gaining Access/ Interview Schedule	Data collection method(s); Investigators; Levels of data; Multiple sources of data	Eisenhardt (1989); Yin (2009)
	Data Collection/ Entering the Field	Overlap data collection and analysis	Eisenhardt (1989); Yin (2009)
Phase II	Data Analysis	Cross-case analysis/ Data coding, memos	Eisenhardt (1989); Strauss & Corbin (1998); Yin (2009)
	Theory Development	Discoveries based on data analysis; Integration of concepts; Propositions	Corbin & Strauss (2008); Eisenhardt & Graebner (2007); Yin (2009)
	Theory Presentation	Emic and Etic balance	Eisenhardt & Graebner (2007)
	Enfolding Literature	Comparison with conflicting/similar literature	Eisenhardt (1989)
	Reaching closure	Theoretical saturation when possible	Eisenhardt (1989); Corbin & Strauss (2008); Strauss & Corbin (1998)

Initial Theory: Research Questions.

The two research questions are grounded in the behavioral theories of the firm to understand how firms survive through severe challenges and resource constraints. The behavioral theory literature typically addresses large firms and their uses of excess resources to buffer against environmental shocks (Cyert & March, 1963) or to resolve conflict among actors or coalitions within the firm (Cyert & March, 1963; March & Simon, 1958). What has not been investigated and reported in the literature, and thus remains unclear, is how some firms persist and sometimes even flourish in the face of severe challenges and resource constraints. Similarly as puzzling is how some entrepreneurs discover, create and pursue opportunities – including starting-up new ventures – in these same constrained conditions. Despite penurious environments, some organizations have not given up and even other have opened without the benefit of high – or even moderate – environmental munificence.

Also explored at great lengths among the behavioral theories is how organizations formulate aspirations based on historical performance, historical aspirations or by social comparison factors (Cyert & March, 1963; Simon, 1955). Aspirations tend to adapt to the level of achievement over time (Simon, 1955), however resources are presumed to help maintain aspirations and their respective levels and prevent the sharp decline in response to difficulty achieving aspirations (Cyert & March, 1963). High aspirations can be one driving factor for surviving; however, even if entrepreneurs are committed to the survival – and even the creation – of their firms, how do they do this in the face of negative slack? It is not likely that aspirations alone can create or maintain a firm without adequate resources. Positive slack provides the foundation which allows firm leaders to allocate resources between different

operating units or activities of the firm in a manner that maintains and shapes operations (Cyert & March, 1963). However, prior theory and research provide few insights into how leaders may motivate and shape the behavior of organization members and supporters under conditions of negative slack. How do firm leaders effectively allocate inadequate resources? Notions of “satisficing” from the behavioral theories (Simon, 1947; Simon, 1955) and related notions of “making do” from the entrepreneurship literature also provide only limited hints. There is little theoretical basis to explain – behaviorally – how some firms continue to hang together while they are barely hanging on.

RQ1: How do surviving or new entrepreneurs hold organizations together during difficult times?

Entrepreneurs may demonstrate persistence and also keep their firms together despite negative slack. But how do they avoid becoming zombie firms – stuck in a state of no growth and barely managing to survive? Research suggests that positive slack enhances some forms of experimentation leading to growth (Nohria & Gulati, 1996), but says very little about achieving growth under negative slack. Not only have firms survived, started-up or held it together, as described in the first research question, but some firms have managed to create new – and exciting – opportunities among negative slack and under constraints imposed from the environment. Thus, I will explore patterns of behaviors that allow creation of new growth trajectories in the face of persistent resource constraints.

RQ2: How do some entrepreneurs spring back after shocks while still operating under resource constraints?

Case Selection: Theoretical Sampling.

“Theoretical sampling is concept driven...It is especially important when studying new or uncharted areas because it allows for discovery” (Corbin & Strauss, 2008, p. 145). As anticipated by using theoretical sampling, the sample evolved over the course of the study to facilitate discovery and “simply means that cases are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs” (Eisenhardt & Graebner, 2007, p. 27). The original research design called for a final theoretical sample of eight (8) firms. However, as entrepreneurs were interviewed, similarities and differences emerged that appeared critical to investigate for the theory. I continued to conduct interviews with additional firms to explore findings and to explore replication across cases. Fourteen (14) case studies were built to arrive at the final sample of eleven (11) firms.

The final sample of eleven (11) firms is motivated by three major factors that follow inductive theory building and theoretical sampling strategies. First, I entered the study with questions regarding a specific resource constraint (human capital) and behaviors used to overcome this constraint, believing that skill sets would be limited in traditional textile manufacturing. I did find instances of human capital resource constraints and behaviors used to overcome them. However, following interviews with approximately five different firms, I realized a replicated pattern of much greater resource constraints within each firm – multiple types of constraints I later theorized collectively as negative slack – and expanded my investigation to include other aspects of the overarching penurious environment. Therefore, I broadened my exploration beyond just human capital constraints.

Second, when I began considering the multitude of constraints, I also realized that firms were committed to survival beyond economic aspirations; entrepreneurs expressed a variety of reasons for trying to survive and I observed multiple behaviors enabling survival. In response, I augmented my interview schedule with questions about aspirations – and changes in aspirations. I discovered that a myriad of behaviors were being utilized to achieve not only one, but multiple aspirations and holding things together meant using a combination of behaviors.

Third, I discovered that more firms than I had first estimated had been able to survive shocks to the industry. I therefore decided to include more of the surviving firms in the sample to be able to evaluate aspirations and behaviors that led to survival across those organizations and over time, rather than only start-ups amid adversity. Taking together the three expansions – the inclusion of constraints across multiple resources, the recognition of many reasons for trying to survive and the inclusion of long-surviving firms – I decided to shape the sample such that the “survivors” were established prior to the textile globalization opportunities created by free trade agreements (in 1994) and the “start-ups” were established after 1994, but prior to or during the economic crisis at which the stock markets dropped dramatically in September 2008 (Twin, 2008). Therefore, the *survivors* have been able to withstand two shocks and the *start-ups* have been able to withstand one, which helps to normalize the experiences of the firms and assist with replication logic across circumstances. Two of the three firms not included in the final eleven (11) are still willing to participate and I may continue to develop cases studies around them for future research.

The eleven (11) firms in the final sample used to inductively develop the theory of organizational resilience met the following criteria:

1. six (6) firms experienced globalization of the textile industry and the current economic crisis (“survivors”),
2. five (5) firms experienced only the current economic crisis (“start-ups”),
3. the *founding* entrepreneur(s) were able to devote time to the case development (firm age),
4. perspectives of employees and other stakeholders of the organization were accessible and the organization had achieved some growth beyond just the entrepreneur (firm size), and
5. proximity to North Carolina State University was within a 200 mile radius for travel purposes.

I formulated my sample by culling through lists of firms collected from several sources, including informal interviews with associates at the College of Textiles at North Carolina State University, internet searches, references from members of the textile industry, and a database containing prior work conducted between the North Carolina Department of Commerce and North Carolina State University College of Textiles (Cassill, Little, Godfrey, & Frederick, 2006). Secondary data, for background information and initial screening of each firm, were gathered through these same modes and was also traced through industry journals and publications. Table 3 shows the full fourteen (14) firms considered for the study and the eleven (11) firms in the sample for the theory of organizational resilience are designated by the “Final Sample” column.

Table 3: Theoretical Sample Demographic Data

Final Sample	Organization	Number of Shocks (survivors=2, startups=1)	Reason for Exclusion	Max Size
Yes	Firethorn	2		> 50
Yes	Holly	2		> 50
Yes	Magnolia	2		> 50
Yes	Redbud	2		> 50
Yes	Azalea	2		< 50
Yes	Nandina	2		> 50
No	Carolina Cherry	1	Lack of participation	< 50
Yes	Pampas	1		< 50
Yes	Juniper	1		< 50
No	Tea Olive	1	Discovered firm was originally founded long ago	> 50
Yes	Jasmine	1		< 50
Yes	Dogwood	1		< 50
No	Chinese Fir	1	Not focused as a full-time organization	< 50
Yes	Camellia	1		< 50

The diversity and replication within the sample satisfies the theoretical sampling methodology. Table 4 shows the final eleven (11) firms in a 2x2 theoretical sampling matrix.

Table 4: Theoretical Sample Matrix

	Survivors (founded pre-1994)	Startups (founded post-1994)
High Growth (>50 ee's at some point)	Magnolia, Nandina, Firethorn, Holly, Redbud	
Some Growth (>founders at some point)	Azalea	Camellia, Pampas, Dogwood, Juniper, Jasmine

Research Protocol: Primary and Secondary Data.

Protecting the rights and welfare of the firm founders and employees was a major consideration during this study and protocol complied with the Institutional Review Board (IRB) standards. Appendices B-F contain documentation approved by the IRB. In addition, the content of the following *Approach Protocol* towards human subjects was approved through a full review process.

Approach Protocol.

Founders of textile firms were contacted through an initial phone call during which I introduced myself, gave a brief explanation of the research, and requested to visit the firm to further explore a working relationship. A ‘Recruitment Call Script’ is provided in Appendix D. If an email was necessary, as noted in the script, the same information was included in the email. I contacted 25 firms: one immediately declined, one deferred participation until 2011 and nine did not return phone call messages.

Up to two (2) researchers, listed on the IRB documentation, conducted the initial interview, which lasted no longer than 90 minutes and was conducted at the firm’s facility. I guided the conversation to probe for answers likely to result from the questions in the “Questionnaire Guide” provided in Appendix F. At the conclusion of the interview, the founder then decided to continue participation with the “Informed Consent Form for Research: Entrepreneurs” (Appendix B) or declined the invitation. In all cases, each entrepreneur agreed to participate in the study following the first interview. Equally, I reserved the option to decide that a particular firm was not a candidate for the theoretical sampling purpose. However, in all cases, I approached all cases for additional interviews.

Employees of the textile firms who were asked to participate in the interview were those who were likely to experience day-to-day challenges in their work environment. Both management and employees working in the manufacturing area were approached for interviews and observations, including full-time and part-time employees. The founder of the firm introduced me to the employees of the firm with the provided “Employee Introduction Script” (Appendix E). I interviewed up to eight (8) employees per organization. The script contained instructions for the employees to contact the investigators outside of the work environment. The purpose was to give each employee an opportunity to accept or decline the invitation to participate after they have had time to review the “Informed Consent Form for Research: Employees” (Appendix C). This method also minimized the risk of the employer or a colleague overhearing the conversation. The process of the employee introduction and exchange of personal contact information between the employee and the investigators was established to encourage uniformity across employees. However, in all cases, each employee immediately agreed to participate during the initial introduction and preferred to meet at the firm facility location rather than opting for an external meeting location.

Phone interviews or conversations restricted to off-site locations were not feasible for this study; it was imperative that I visited the firm’s site and visit the entrepreneur in his/her natural setting for observations. This is for multiple reasons, but one example is when the burden placed on the employee to recall specific event(s) may be too great for accurate recollection after events/activities have occurred. Standard interviewing techniques recognize burden and associated error rates; however the investigators intended to capture current events as they unfolded to be able to assess behaviors from a new perspective. Another

example is when specific behavior(s) that may not seem important for the employee to relay in a telephone or separate interview may be the exact behavior(s) the investigators intend to document. Without direct observation and interaction, both examples introduce increased opportunities for measurement error (Groves, Fowler, Couper, Lepkowski, Singer, & Gourangeau, 2004). Therefore, it was necessary to conduct observations and inquiries on-site and within the natural work environment to help minimize this error. While observations without interruptions were the first method of data collection across all employees, some activities and behaviors required probing for clarification of activities.

In sum, employees of a firm experienced the same introduction process and opportunity to accept/decline participation externally to the work environment. The initial interview location/time was set at the preference of the employee with appropriate facility meeting rooms. Interaction with employees during observations only occurred with those who agreed to participate while discrete observations were made of all employees.

Technically, the grounded theory development process states that qualitative data collection should end when theoretical saturation is reached, meaning no new data is being discovered (Corbin & Strauss, 2008; Strauss & Corbin, 1998). For the most part, this occurred for the final eleven (11) firms of the sample and in great enough detail to establish the elements of the theory of organizational resilience. Pending testing of the resultant theory, the qualitative inquiry of the phase one case development will continue beyond the completion of the dissertation.

Data Collection: Field Work.

As stated in the IRB-approved protocol, initial interviews with each entrepreneur lasted no longer than 90 minutes. Initial interviews with employees lasted no longer than 45 minutes. Data from initial field interviews were consistently collected from mid-February 2010 through mid-March 2010. Over this time period, I gradually progressed from open, exploratory conversations through semi-structured interviews. The specificity of my questions was based on the emerging theory.

Table 5: Data Collection - Interviews

Organization	Number of Interviews with Founders	Number of Stakeholder Interviews	Number of Direct Observations	Total Interactions
Firethorn (2)	2	1	1	4
Holly (2)	3	2	3	8
Magnolia (2)	10	7	5	22
Redbud (2)	1	0	1	2
Azalea (2)	2	0	2	4
Nandina (2)	2	0	2	4
Pampas (1)	3	0	2	5
Juniper (1)	1	3	2	6
Jasmine (1)	3	0	2	5
Dogwood (1)	5	0	3	8
Camellia (1)	2	3	2	7
Totals	34	16	25	75

I implemented *three* principles of data collection during case study development: used multiple sources of evidence, created a case study database, and maintained a chain of evidence (Yin, 2009). Triangulation is the rationale for using multiple sources of evidence; data triangulation develops converging lines of inquiry and helps to address construct validity

(Yin, 2009). Other forms of triangulation can corroborate the data as well, including investigator, theory, and methodological triangulation (Yin, 2009). Investigator triangulation occurs as two researchers conduct interviews with case study candidates. For the purpose of triangulation, I was joined for one interview per case study – and in some cases twice, with the exception of one case. Additional sources of data included a firm’s internal documentation, archival records and physical artifacts.

Along with gathering multiple sources of evidence through primary interviews, I also conducted direct observations. *Primary interviews* were conducted at multiple levels of stakeholders (founder(s), employees, advisors). Questions during these interviews started with general questions and lead to specific questions as the iterative data collection, analysis, and theory development progressed. *Direct observations* occurred in the manufacturing facility as the founder and employees conducted day-to-day operations. I did not conduct *participant observations*, as originally planned. As I expanded my investigation beyond simply one behavior (human capital bricolage) and one constraint, directly experiencing the work that was being observed and documented became less relevant.

The case study database included notes, memos, coded transcripts and case study narratives. I collected this data in nVivo qualitative research analysis tool; first in version 8 and then upgraded mid-project to version 9. Using the software package helped to increase the reliability of the study and made the data available for independent inspection (Yin, 2009). Additionally, the identity of the firms is concealed in this database for the security and protection of the firms and individuals participating in the research.

The purpose of maintaining a chain of evidence is to allow an outsider to trace the derivation of case study conclusions back through the data to the initial research questions and also increases the reliability of the information in the case study (Yin, 2009). Data and discoveries are documented with dates, times, events, persons involved, and other pertinent facts to maintain this chain of evidence.

My observations and interview data were purposefully collected in a manner that attempted to limit bias; an approach that gathers data from highly knowledgeable informants from various perspectives of the phenomena in questions will generate the most objective data set (Eisenhardt & Graebner, 2007). In line with the principles outlined by Yin (2009), the combination of retrospective (archives, documentation) and real-time data sources (direct observations and longitudinal interviews) assists in building depth and more current data (Eisenhardt & Graebner, 2007).

Real-time data collection consisted of hand-written, typed and audio recorded notes. Initial interviews were audio recorded in only three of the fourteen cases. Otherwise, I documented the initial interview with hand-written notes. I did not audio record our conversation until the participant agreed to participate with the IRB documentation. In the three instances where I recorded the initial conversation by voice recorder, the participant had already agreed to participate. In all cases of audio recording, the participants verbally agreed and the recorders were placed in plain sight. Directly following an interview and data collection (within 48 hours), I transcribed hand-written notes as applicable and added these to the existing case study database. I also recorded reflections about each interview regarding participant demeanor and my comparison of interview “success”, as applicable. I made notes

of questions to cover in the next interview as I reflected upon the transcripts. I transcribed the first four audio hours, and then the audio files of interviews from that point forward were transcribed by a professional transcription service recommended by the DELTA department at North Carolina State University. As the transcriptions were processed and returned, I listened to the audio file and read the transcription, making changes as necessary, to every transcript.

Primary Interviews.

The founders and employees were interviewed through increasingly focused interviews as the cases were developed and simultaneously analyzed. Yin (2009) suggested developing levels of questions to create a complete case study. The levels are as follows and were utilized in this research for theory development:

- Level 1: Questions asked of specific interviewees
- Level 2: Questions asked of the individual case
- Level 3: Questions asked of the pattern of findings across multiple cases
- Level 4: Questions asked of an entire study
- Level 5: Normative questions about policy recommendations and conclusions, going beyond the narrow scope of the study. (p. 87)

Initially, I utilized Level 1 and Level 2 questions to understand the nuances of each case and to screen for theoretical sampling purposes. Once I began to see replication across cases, I further explored these instances with Level 3 questions, followed by Level 4. I did not engage the entrepreneurs in discussions regarding Level 5 questions because my goal was to stay within the scope of this study.

Each level of questioning followed the recommendations from Kahn and Cannell (1957) and Cannell, Miller, and Oskenberg (1981) regarding sensitivity to the degree of threat and conflict, demand on the respondent, relationship between the interviewer and interviewee, confidentiality agreement included in that relationship, and conscientiously controlled and nondirective probing. The types of questions I asked as I continued to develop my theory were difficult for most participants to answer. For example, I asked whether or not the entrepreneurs had ever considered closing their firms or if there had been a time when they felt like they had no option but to close. On at least four occasions, the entrepreneurs came to the verge of tears as they talked about difficult situations and decisions they faced in their organizations. The intensity of their emotions and the honesty of their responses allowed me to understand the level of trust we developed in our relationship (low threat and conflict) and allowed me to judge the authenticity of their responses (nondirective probing).

On most occasions, I noticed distinct differences between approximately the first and third interviews that allowed our conversations to move beyond the “canned speech” most entrepreneurs had prepared for external audiences. In these cases, the entrepreneurs offered more “matter-of-fact” responses as we built rapport. It became apparent in some cases that respondents were themselves learning their own answers to some questions as they explained them to me. “I hadn’t thought of it like that before” was expressed on several occasions as well as, “talking with you makes me think about things differently.” This naturally brings in the scope of possible errors in self-reporting and social desirability (described briefly below), however these errors faded over time.

The questions in the “Questionnaire Guide”, Appendix F, were general starter questions with each of the firm founders. The questions of the last two sections of the “Questionnaire Guide” (About the Challenges and About the Resources), describe the types of behaviors that were observed; behaviors associated with how individuals solve challenges encountered in day-to-day operations with various types of resources. The selection of (up to) eight (8) employees was based on those who agreed to participate and on their involvement in dealing with the types of behaviors under investigation. The greatest number of employees I talked with at any one firm was six (6).

Direct Observations.

Direct observations occurred in the manufacturing and office setting and were conducted as unobtrusively as possible. I toured the manufacturing facilities whenever possible and observed production for all but one manufacturer. Two startups had decided against manufacturing in-house, yet contracted the manufacturing locally, and I did visit at least one of their contracted facilities. Yin (2009) suggests creating a checklist of behaviors to be observed and taking pictures as permitted. I did not take pictures inside the manufacturing facilities, but sketched the floor layout in my case study notes. This checklist included “normal” operations and procedures, day-to-day challenges, solutions to the challenges, and the process by which the solutions are reached.

Measurement Error.

Interviewing skills are acquired over time after extensive practicing and situational experience. For some initial interviews, I assumed an apprentice position, and carefully participated with my dissertation advisor for interviews. This proved invaluable for my own

learning curve. Techniques for creating a trusting and non-threatening environment were listed earlier (Kahn & Cannell, 1957). I tried to minimize opportunities to inadvertently make overt/judgmental/encouraging responses to the participant and inaccurate notations during the interviews (Currivan, 2009). I was also alert to these interviewer errors and to over-reporting and under-reporting by the participants due to social desirability (participant wanting to be viewed in a favorable light) pitfalls. As I mentioned, at least by the second visit, most entrepreneurs were comfortable enough to open up beyond a typical speech. In all other cases, they held no inhibitions for sharing struggles and it is my evaluation that I gained enough legitimately honest information to accurately assess the elements of my theory.

Phase II: Inductive Theory Development

Data Analysis: Within and Cross-Case.

Developing thorough case studies generated an overwhelming amount of data (Miles & Huberman, 1984). In this research, I stored and coded the data – ultimately – with the assistance of software tool, nVivo9 (Suddaby, 2006). In an iterative process, I structured the data per case by generating case reports and as I collected more data, I updated the case report, memos and coding of the within-case data. I analyzed the coded data, memos, artifacts, and additional documentation gathered from the firms in a cross-case format for themes, similarities, difference and gaps to guide additional questioning.

Yin (2009) suggests five techniques for analyzing case studies: pattern-matching, explanation building, time-series analysis, logic models, and cross-case synthesis. I utilized the cross-case synthesis technique to generate word tables identifying features of cases that should be populated for each case to facilitate comparisons (Yin, 2009). My analysis

followed a process of what Miles & Huberman (1994) define as “consisting of three concurrent flows of activity: data reduction, data display, and conclusion drawing/verification” (p. 10). *Data reduction* occurred continuously throughout the process of qualitative data gathering by my decisions in selection, focusing, simplifying, abstracting, and transforming the data from field notes and transcriptions (Miles & Huberman, 1994). I systematically assembled information into *data displays* to present in matrices, graphs and charts to facilitate conclusion drawing and action (Miles & Huberman, 1994). I formulated multiple speculative patterns, or *conclusions*, about the data, but through an open-minded and critical process. I verified speculations and tested for their validity across multiple and they will be further tested in a full survey (Miles & Huberman, 1994). These three streams of data analysis formed an iterative, cyclical process to arrive at inductively generated grounded theory; I kept decision rules for parsing and designing the data as part of the chain of evidence). The major decision process of theoretical sampling represents this log of changes.

The following list follows suggestions from Yin (2009) for creating a case study database and developing a chain of evidence from multiple resources. I used these steps to create my documentation in the nVivo software tool and through a variety of spreadsheets and tables.

1. Raw material: field notes, tapes, site documents; multiple data sources including artifacts and outside documentation
2. Partially processed data: write-ups, transcriptions. Initial version, and subsequent corrected, “cleaned”, “commented-on” versions/chain of evidence
3. Coded data: write-ups with specific codes attached/chain of evidence
4. The coding scheme or thesaurus, in its successive iterations/chain of evidence
5. Memos or other analytic material: the researcher’s reflections on the conceptual meaning of the data/chain of evidence

6. Search and retrieval records: information showing which coded chunks or data segments the researcher looked for during analysis, and the retrieved material; records of links made among segments/chain of evidence
7. Data displays: matrices or networks used to display retrieved information, along with the associated analytic text. Revised versions of these/chain of evidence
8. Analysis episodes: documentation of what you did, step by step, to assemble the displays and write the analytic text/chain of evidence
9. Report text: successive drafts of what is written on the design, methods, and findings of the study/chain of evidence
10. General chronological log or documentation of data collection and analysis work
11. Index of the above material/case study database.

Theory Development.

Theory should explain, predict and delight (Bacharach, 1989; Dubin, 1976; Sutton & Staw, 1995; Whetten, 1989). Based on the case studies and as will be described in Chapter 4, several patterns of behaviors emerged to form elements of the theory. As I analyzed each case individually to try to understand what was happening in each case, I generated a series of speculative hypotheses (propositions). During cross-case analysis, I then “tested” the proposition to see if it also explained what was happening in the subsequent case. Most of the speculative hypotheses/propositions did not survive continued comparison with the data. However, the elements of the theory presented in the next chapter demonstrate the replications that did hold true across cases. The elements – or boundary conditions (Dubin, 1976) – of the theory are the variations in the forms of commitment, resourceful behaviors, complexity and adaptation of aspirations and overall resilience. These pieces of surviving and startup organizations are the limited portion of the world that is to be explained and situation – under a penurious environment and firm-level negative slack – in which the theory should hold (Dubin, 1976). The practical application – or the utility – of the

contribution to the academic theory and literature (Bacharach, 1989; Dubin, 1976) is complementary to contributions to development and applications in the ‘real world.’ I address implications for both theory and practice in Chapter 5.

As I iterated between the data and emerging theory, my theoretical sensitivities (Glaser, 1978) changed substantially, and were described earlier in the theoretical sampling section. I originally entered this study focused on investigating patterns and impacts on one particular form of bricolage emerging in the entrepreneurship literature – human capital bricolage – as an important response to overcoming resource constraints. However, the study then evolved into a more general study of resourcefulness as it became apparent that the firms I was studying were engaged in a much more complex pastiche of resourcefulness than I could explain by focusing only on bricolage or especially one form of bricolage. Further, as I began conceptualizing negative slack, greater influences from the environment were also obviously impacting the firms – and yet the older and newer firms were responding with an impressive array of behaviors and their aspirations were somehow increasing as other firms around them were failing. Therefore, I broadened my study – from 6 to 8 to 14 and then to 11 firms in the theoretical sample – to generate elements of a theory of entrepreneurial resourcefulness and resilience that became clearer through this iterative process.

Theory Presentation & Enfolding the Literature: Emic & Etic protocol.

The theory I present in Chapter 4 indicates causal patterns among the elements of my theory of organizational resilience. Miles and Huberman (1994) describe a causal network as “a display of the most important independent and dependent variables in a field study and the relationships among them” (p. 153). The grounded theory that evolved from the research

questions starts to establish this relationship of variables, but only as early causal patterns; the resultant theory summarizes *directional* relationships that will be tested in a later study. The purpose is to build theory and not to tell stories and therefore the careful development of summary tables and figures tied to the text is crucial to presenting the theory (Eisenhardt & Graebner, 2007). Further, though the theory may appear somewhat parsimonious, it preserves and presents the relationships I observed over multiple cases and “there are typically fewer of these relationships than there are details in a richly observed single case” (Eisenhardt & Graebner, 2007, p. 30).

Throughout the presentation of the theory in the next chapter, I will use a combination of emic and etic tactics to capture snippets of the richness of the data. As first noted by Kenneth Pike (1954), emic is the perspective of the participant and etic is the perspective of the observer. By respecting both the perspective of the participant and the theoretically grounded perspective of the researcher, the combination of emic and etic approaches transcends some limitations common in both ethnographic and survey-based approaches. The combination of these accounts of behaviors adds depth to the elements of the theory of entrepreneurial resourcefulness and resilience.

Finally, I have taken great lengths to disguise the identity of the entrepreneurs and firms in several ways. I generated pseudonyms (based on Augusta National Golf Club hole names) and created a proxy to indicate the age of the firm using either a “1” to indicate newer firms – startups – founded during or prior to the global economic crisis (surviving 1 shock, but under a constrained environment) or a “2” to indicate older firms – survivors – founded prior to globalization (surviving 2 shocks). All firms operate in the traditional fabric and

apparel industry, yet I removed indicators of the types of products or services associated with their organizations and other verbiage that would reveal their identity. Some firms in the sample were started by more than one individual and for the sake of the descriptions I recount the narrative as if each firm was founded by only one entrepreneur. Finally, though some firms were founded by female entrepreneurs, I refer to all entrepreneurs as male.

Evaluating the Theory

Strauss and Corbin (1998) offer a final note about the differences between evaluating qualitative and quantitative studies and put forth guidelines for evaluating the quality of each unique qualitative study. One traditional evaluation criteria for quantitative studies is generalizability; however, this qualitative study is positioned for explanatory power rather than generalizability (Strauss & Corbin, 1998). Therefore, in circumstances similar to the ones in the theoretical sample, similar outcomes can be predicted by this new theory (Strauss & Corbin, 1998). The theory presented in Chapter 4 is substantive and successfully meets all evaluative criteria suggested by Strauss and Corbin (1998): I generate concepts throughout the theory and systematically relate them with conceptual linkages and density, I build variation into the theory and thoroughly explain the conditions for variation, I take process into account and finally, the theoretical findings make significant contributions to the scholarly literature – and are likely to generate additional research and conversation for future entrepreneurship and organization theory development. In turn, this will increase the depth and perhaps breadth of the concepts, conceptual linkages and variation that may generate explanations for a broader array of circumstances – and thus, increase explanatory power.

CHAPTER 4: RESULTS

Theory Presentation

The scholarly literature on entrepreneurship tells us a great deal about entrepreneurial success. In a cherished and heroic image, an enterprising individual discovers a lucrative opportunity, assembles a strong team and investments of other peoples' money and creates value by delivering novel products and services to markets that eagerly accept them. Wealth, innovation and employment growth often come along as part of the package. Many elements of this narrative have been well studied and we understand a great deal about this classic story of entrepreneurial success. We know much less, however, about how entrepreneurs may keep going when things do not work out as well: when their venture struggles to find or construct an opportunity, when investors are not impressed or when customers turn elsewhere.

Most ventures experience a variety of struggles, and though – as is commonly acknowledged, many disband – some ventures persist despite daunting challenges. I am particularly interested in understanding the patterns of behavior and orientations that underlie the persistence of ventures that do not give up despite difficult circumstances. Such entrepreneurial resilience, which I define as “the capacity for positive adaptation under adverse conditions,” has received remarkably little attention in the scholarly entrepreneurship literature. Entrepreneurial resilience is important both because it represents an important element of entrepreneurial behavior, but also because many firms that are eventually successful do so by resiliently surviving periods of troubles.

Images of “creative destruction” (Schumpeter, 1942) are a staple in the scholarly study of entrepreneurship. The Schumpeterian “gale” storms through a sector of the economy, destroying and replacing much of what stands. Changes such as the creation and proliferation of new technologies can sometimes strengthen incumbents (Tushman & Anderson, 1986), but may also provide challenges that result in massive changes to an industry sector. I developed this theory by studying entrepreneurs and firms operating in a context plagued with unfavorable conditions – the traditional US textile industry – created by two specific environmental jolts or shocks. First, the textile industry in the United States has changed dramatically over the past two decades with firms’ increased pursuit of globalization strategies, representing the gale of destruction as domestic employment has dramatically decreased with changes in regulatory agreements and competition from low wage nations. Second, the current global economic crisis has significantly decreased the availability of many kinds of resources, and especially financial resources. This combination of events has drastically reduced environmental munificence and caused a reduction in slack for many firms. These circumstances provided an opportunity for me to assess variations in firm resilience by observing how entrepreneurs responded to either or both of these shocks. The older firms I studied, *survivors*, experienced both of these shocks. Newer firms that began between these shocks, *startups*, experienced the financial crisis directly but were indirectly affected by the remnants of textile globalization, and especially the gaps in the domestic supply chain. In this dissertation, I build elements of a theory of entrepreneurial resourcefulness and resilience. My theory explains differences in resilience across both sets

of firms as combinations of variation across forms of commitment, complexity of aspirations and resourceful behaviors.

Model Description

As outlined in Figure 2, my theory suggests that differences in *forms of commitment* to keep organizations together have important effects on both the entrepreneur's aspirations and the resourceful behaviors in which they engage when faced with shocks to the competitive environment. Together, differences among entrepreneurs in their forms of commitment, aspirations and behaviors allow me to provide an explanation for the variations in underlying resilience that I was able to observe as the entrepreneurs operated under conditions that I describe as “negative slack.”

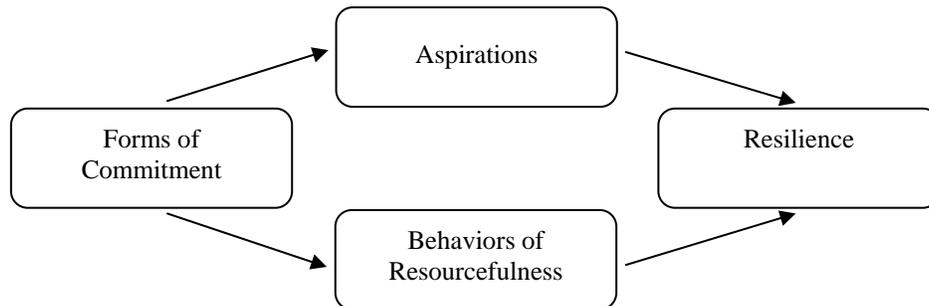


Figure 2: Theory of Organizational Resilience

Forms of Commitment

The entrepreneurs I studied exhibited three distinctive forms of commitment to their organizations. While all were committed to economic or financial goals of growing the organizations and generative profits, I also discovered two forms of commitment in which these commitments displayed consonance with – indeed, were intertwined with – the entrepreneurs’ personal values. I labeled these values-driven commitments “*identity-based*” and “*ideology-based*” and labeled the less value-laden form of commitment, “*economic*”, as described in Table 6.

Table 6: Forms of Commitment

Forms of Commitment		
<i>Values Consonance Forms</i>		
<i>Identity-based commitment</i>	<i>Ideology-based commitment</i>	<i>Economic commitment</i>
The identity-based form of commitment embodies the values of “this is who I am” (in philosophical terms: “being”). The entrepreneur is committed to maintaining the business and making progress toward its goals because the goals are inextricably tied to the entrepreneur’s values and sense of personal identity.	The ideology-based commitment represents the values of “this is who I want to be” (in philosophical terms: “becoming”). The entrepreneur describes and expresses commitment to a set of personal values, but these values are themselves ideological targets the entrepreneur is trying to meet and the venture is an important way of enacting these values.	An economic commitment is driven by more purely financial goals. Commitment to the firm is for the most part purely a commitment to a means to a financial end.

Although it is possible to imagine dynamism in forms of commitment, I found no evidence of any changes in my sample. For example, it is conceivable that an entrepreneur who begins with a purely economic commitment embedding this later in ideological values,

or an entrepreneur's ideological commitments becoming firmly embedded in his/her identity. Because I observed no such changes and found no strong evidence of any such changes in the prior history of the firms I studied, possible changes in forms of commitment are beyond the scope of the theory I develop in this dissertation.

Aspirations

In every case, the entrepreneurs' commitments were to both the survival of their firms and to one or more additional aspirations. I identify an aspiration as the *object* of the form of commitment. As suggested above, each entrepreneur expressed an economic aspiration reflecting one fundamental purpose for operating their business – to make a profit. However, entrepreneurs with a values-based form of commitment – grounded in either identity or ideology – demonstrated multi-faceted objectives, including both economic *and* values-laden aspirations.

The complexity of multi-faceted aspirations serves one significant role in my observations: multi-faceted aspirations allow entrepreneurs to maintain or even increase the level of their aspirations by switching to new aspiration. The number of aspirations can indicate the degree to which an entrepreneur is able to supplant or at least suspend one aspiration that may be under duress to focus on another. For example, in the case of a single-faceted aspiration, an entrepreneur may have nowhere to turn and see no option but to abandon the sole aspiration if it seems infeasible. However, if the entrepreneur also harbors a second aspiration then the entrepreneur can turn his or her focus to that aspiration; multi-faceted aspirations allow entrepreneurs to focus on one aspiration while deemphasizing another. This represents a change of focus – illustrated below as a *horizontal* change in

aspirations – as shown in. Furthermore, a second type of change may occur *within* each aspiration. The level of any particular aspiration may increase or decrease and is depicted in as a *vertical* change.

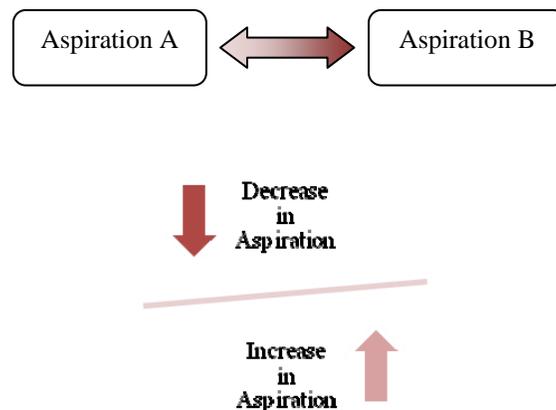


Figure 3: Change in Focus, horizontal change; Increase/Decrease, vertical change

I observed that entrepreneurs with ideological commitments demonstrated greater leeway in shaping their aspirations, both through a change in focus or increase or decrease change in the level of aspiration. By contrast, entrepreneurs of the identity-based form of commitment were more likely to stay the course to achieve an established aspiration – and less likely to demonstrate changes in focus. In the case of purely economic commitment, a change in focus was obviously not an option; the likelihood of an increase or decrease in aspiration was not shaped in a straightforward way by this commitment.

Behaviors of Resourcefulness

As shown earlier in Figure 2, I found that an entrepreneur's form of commitment shapes the selection of behaviors. Entrepreneurs in this study created ways to do more with less by being *resourceful*. I define "resourceful" as *patterned variations in making use of limited resources*. Thus, the *behaviors of resourcefulness* are the mechanisms through which the commitments are pursued.

I grouped the behaviors of resourcefulness observed in this study into three categories: bricolage, thrift and community, shown with descriptions in Table 7.

Table 7: Behaviors of Resourcefulness

Behaviors of Resourcefulness		
<i>Bricolage</i>	<i>Thrift</i>	<i>Community</i>
"Making do by applying combinations of the resources at hand to new problems and opportunities" (Baker & Nelson, 2005). Behaviors in this category were demonstrated through a refusal to enact limitations or recombining existing resources.	A variety of behaviors related to management of resources such as: seeking good deals; seeking subsidies from various agencies or organizations; bootstrapping and frugally managing finances. These behaviors were demonstrated as a result of learning from prior mistakes or based on long-standing beliefs or principles of the entrepreneur.	Behaviors that involved interacting with other people and organizations based on shared interests. These behaviors varied by the authenticity of the entrepreneurs in participating in these communities.

Entrepreneurs whose commitments were tied up with their identities were tightly constrained not only in their ability to make major adjustments in either the aspiration or the level of the aspiration, but also in the manner in which they could behave resourcefully. This was because a strong sense of connection between the entrepreneur's personal identity and

their aspirations and behaviors meant that many possible changes would be seen not just as an organizational change but as a violation of their personal identity. In contrast, entrepreneurs with an ideological commitment were able to take greater liberties in a variety of resourceful behaviors and were able to more freely explore the boundaries of each behavior. Finally, entrepreneurs with the greatest flexibility for choosing behaviors were those with purely economic commitment. These entrepreneurs could test the boundaries of behaviors against even legal risks because their commitment was very little shaped by their values.

Resilience

I observed two primary elements of resilience. First, I observed a range of orientations toward continuation of the venture from “ready to give up” to “endeavor to persevere.” Second, some ventures seemed stuck in “survival” mode and displayed little effort to move forward, others were trying an array of activities to gain traction towards their goals and aspirations, while some had actually achieved forward progress toward their aspirations, as shown in Table 8. Taken together, these elements allowed me to distinguish between low, medium and high rating of resilience.

Table 8: Resilience

Resilience		
<i>Low</i>	<i>Medium</i>	<i>High</i>
Ready to give up	Endeavor to persevere	Endeavor to persevere
Not trying beyond survival	Trying with no results	Achieved progress towards goal

Resource Constraints

Overview of the Environment.

Variations and changes in venture environments affect the likelihood of survival. Less munificent environments can represent challenges both for startup firms and for survival of existing firms (Castrogiovanni, 1991). Recent work has examined the relationship between excess resource availability (organizational slack) and performance within the context of changing and constrained environments and found that organizational slack, and particularly financial slack is quite important for manufacturing firms in environments of low munificence (Bradley, Shepherd, & Wiklund, 2011). That is, having some sort of buffer appears important to surviving downturns in the flow of resources from the environment.

Shock One: Globalization of the Textile Industry.

The traditional US textile manufacturing environment has changed dramatically over the past two decades and now exemplifies an environment of low munificence. This is due, in part, to the advent of free trade agreements (FTAs). The US is currently engaged in eleven bi-lateral or multi-lateral FTAs (those with one other or multiple locations) with three currently pending legislation (Administration, 2011). The Multifibre Agreement (MFA) was established in 1973 and evolved under the Agreement on Textiles and Clothing (ATC) under the World Trade Organization (WTO) (Organization, 2011) and the FTA with Singapore went into effect in 1985; however, the major shock described by the cases in my study was the beginning of the North American Free Trade Agreement (NAFTA) in 1994. The elimination of quotas in 2005 as the WTO began controlling FTAs is also widely cited in my

data. The roles of FTAs are explained in a statement from the Office of Textiles and Apparel (OTEXA) of the US Department of Commerce International Trade Administration:

The US Free Trade Agreements (FTAs) allow US textile and apparel manufacturers to enter and compete more easily in the global marketplace. These agreements eliminate or reduce tariff rates, improve intellectual property regulations, open government procurement opportunities, ease investment rules, and much more. In general, the agreements help level the international playing field and encourage foreign governments to adopt open and transparent rulemaking procedures, as well as non-discriminatory laws and regulations. (Administration, 2011)

This is a very different story than the one conveyed by the entrepreneurs in my study, as shown with select quotes in Table 9. Entrepreneurs and stakeholders participating in the study volunteered their opinions regarding the impacts of the FTAs and the current state of the industry -- including some statements of hope -- based on their own experiences. This selection represents the variety of comments regarding the textile industry from the vantage point of the case studies.

Table 9: Select Quotes about the Industry

Selected Quotes Regarding FTA's
I saw a need develop as more and more manufacturing moves off shore. When I [started in the industry], the same company made it that sold it. In 1985, when the [sales] people took over, they were moving [manufacturing] to China.
In 1993 we were facing a cotton shortage. T-shirt prices went from 2.50-3.50 per shirt. NAFTA came through and shirts went from Martinsville to Nicaragua – within one year shirts went to \$1 per shirt. Profits went through the roof.
Clinton killed us with NAFTA.
Chinese were relentless. I mean, they put all the major manufacturers out of business within three years. Within three years of 2005, all the majors were gone.
But only the United States have put in guidelines and things in place to make sure that you're not doing anything illegal, immoral or wrong, which I think is a good thing, but I think other countries ought to have to face the facts and do the same thing because we're not on an even playing field.
NAFTA surely hasn't helped textiles. I mean anybody that thinks NAFTA has helped textiles don't see the big picture. Not with the unemployment rates being as high as what they are right now and we've set back in our lifetime, we've set back and saw places go out of business that if you would have asked me 20 years ago if I ever thought that place would die, I could have looked you right in the eye and told you, no, that place would be there forever.
You know, they say we're helping the world, some politician will say. We're going to help them with manufacturing, but these poor people – it's sweat labor; we're not helping them. I really don't believe they're benefiting anything from us.
Maybe I'm stupid and trying to row against the ocean with the goods flooding in from out of our country, we're sitting here trying to compete with it. And, we've been reasonably successful so far. To be sure it's been a difficult road to hoe, with the labor so cheap in other countries.
Selected Quotes Regarding the State of the Industry
You are studying in an industry that is absolutely getting crushed. So I hope you discover something to be hopeful about. I find - if I've learned nothing else - I'm like playing in the cemetery here.
Because as we've lost our textile industry. The textile industry started cleaning up in the 70's. And got rid of a lot of heavy metals from [company name] and bad players. But the rest of the world didn't. And so what happens is now we've lost our people that make dyes and inks and chemicals and they're coming back in from the Indias and the Chinas. And so it's slipping back in.
I see things coming back. We're pushing this American thing pretty hard now and people are not given a choice for America.
People are telling us, "We want to come back." Those that have left or moved operations are now trying to find a way to come back -- container prices have changed and it's not as cheap as it used to be to ship goods around.

Shock Two: Current Global Economic Crisis.

The US reported heavy job losses of 240,000 by the beginning of 2008 and the trend continued through 2009 as unemployment reached a 25-year high (Relations, 2011). By March 2009, the number of persons claiming unemployment benefits reached 652,000 and consumer spending dropped in two consecutive quarters in excess of three points each – a record since record-keeping began in 1947 (Newshour, 2009). Though exact losses are still indefinite, reports in 2010 estimated approximately 8 million job losses by that time (Isadore, 2010).

Throughout the economic crisis, available credit and lending has been restricted as “hundreds of billions of mortgage-related investments went bad, mighty investment banks that once ruled high finance crumbled or reinvented themselves as commercial banks, the nation’s largest insurance company and largest savings and loan were seized by the government; and a \$700 billion bailout plan in October 2008 and actions by the Federal Reserve to pump money back into the system headed off a full-scale meltdown” (Times, 2011). The small business liquidity crisis severely impacted entrepreneurs and their organizations (Commerce, 2010). Further, “the share of business owners who say they cannot get adequate financing rose to 41 percent, according to a National Small Business Association (NSBA) survey released in July [2010], up from 39 percent in December and 22 percent two years ago” (Tozzi, 2010).

Negative Slack, Firm Level.

In simplest terms, one can imagine that anything that it is possible for a firm to do with fewer resources is it possible for the firm to do with more resources; there are some

things that can be done with more resources that simply cannot be done with fewer. The very notion of a resource “constraint” implies reduced flexibility, discretion and the ability to manage an organization. Traditionally, identifying positive slack within an organization pivots on this connection. However, I observed behaviors among entrepreneurs and firms that allowed them sometimes to overcome negative slack – constraints – in ways that violate common assumptions of behaviors under difficult or dire circumstances.

The entrepreneurs described many different forms of negative slack, although the most common – across all firms – was related to finances. As an entrepreneur described the situation when he was interested in expanding his operations, “we were broke” and at other points, he said, “we were operating on a shoestring.” Several entrepreneurs – reluctantly, rather than proudly – noted that they had foregone salaries for extended periods of time and admitted sometimes funneling their “savings” back into the organizations to keep them afloat. One entrepreneur explained how he “had to take out money from our IRA to survive” and suffered the penalty as well when he was unable to return the money quickly to the account. He noted, “they [the IRS] felt bad 'cause we're not the only small business that did this but technically they didn't change the law on us so we had to pay the penalties.” Entrepreneurs sometimes expressed their feelings in terms of what they would do if they could generate some slack, for example: “If we could get ahead, then we'd have seed money for other projects. That's what's holding us back right now. It is because we have taken this shock the system, and that's we call it. We don't have seed money and there's a few things we wanna do but without some seed money, we really can't do them. And this is where the government is even saying, in other words all these small businesses, they would do more but

they need some more loans, you know, because we just got hit so hard.” And finally, “Our main issue continues to be capacity in equipment limitations. The banks aren’t loaning money right now.”

Unsurprisingly, in a number of cases, decreasing demand and increasing financial constraints translated directly to human capital constraints. But the industry shocks interfered with staffing in other ways as well. In particular, firms that tried to hire people who had been laid off from other firms found that it was often hard for these people to accept or to adapt to the new realities of the industry. For example, one entrepreneur described his encounters during two interviews while trying to find a new engineer: “[I was planning to] start him off between 30 or 40,000. That’s not what a professor makes or anything, but it’s textiles. One of them was making \$180,000 a year and now drawing unemployment at \$400 a week. He couldn’t bring himself to go to \$40,000. He [had] leapfrogged around different companies to get promoted...The problem with people that are [that age] is that they are brainwashed because they were in that period of time they climbed the corporate ladder real fast, when they could. I can’t find the people that’s not brainwashed...And now they’ve been thrown off and they’re trying to come back up the same corporate ladder with another company. There’s no companies out there...I’m really the only [option] he has [in the US] for what he’s trained for as an engineer...If he found another job, he would have to travel to these undeveloped countries for one of these large companies.”

Once the economy started declining, some entrepreneurs with new employees realized those hires were not being nearly as productive as needed. Another entrepreneur expressed frustration over a particularly significant investment in a new employee’s

performance, “So that was a really big disappointment [the new employee and not bringing in new business]. And that was our single largest salary.” And with another, “we didn’t have time for him to catch on.”

In addition to material and human capital constraints, the shocks to the industry and the economy and the departure and shutdown of so many firms have left gaps in the textile supply chain. As one entrepreneur described, “[that] company spent [millions] of dollars [developing this product] and then decided to axe that whole division” only *after* this entrepreneur had significantly integrated the product into his organization’s competitive advantage. He said, “they shut it down...they basically dismantled it” which left him crippled and without a reliable source of supply. On another occasion an entrepreneur described actually having located the needed links in the supply chain, but suffering because in his opinion many of the surviving firms still had not adapted to new industry realities but kept insisting instead on doing things “the way it’s always been done.” He said, “It’s funny, you know, the large quantities thing. Everybody wants high quantity...they’re going to have to do more to adapt...because [the way they’re doing it has been] proven not to be the most successful way of going about it...it may not be the old school way of doing business production line style, but that [adopting flexible production methods] gives this factory a lot of flexibility...it was very weird how difficult it was to make them think that would help.”

The founder of one survivor firm summarized the trials and tribulations he has withstood in his venture and the accumulation of effects by saying, “And then you have to pile that on top of the recession we were going into before 9/11, 9/11, the mortgage crisis, China, you know – everything. Everything piles in there and it’s too simplified to point to

one thing and say, (lightly pounds fist on the table) blame [one event].” One entrepreneur uttered disbelief about the timing of his startup, “I had no intention of trying to start a business during a recession.” And finally, an entrepreneur expressed concern over the combination of constraints by describing a particularly costly mistake by an over-confident – but well-meaning – employee by saying, “You know, everyone has felt the pain of that. The trouble is that we operate too close to the edge. You know, ideally, you’d have enough redundancy and slack in the system.”

Forms of Commitment

I identified three distinctive forms of commitment that comprise the first element of the theory of organizational resilience: two commitments with value-consonance, “*identity-based*” and “*ideology-based*” and a non-value-laden form of commitment, “*economic*.” Different aspirations and behaviors were shaped by these commitments. In this section, I will describe each firm’s form, outline patterns of the forms of commitment across the firms and discuss the ways the aspirations are shaped by the commitment – including aspiration complexity and adaptation.

When entrepreneurs described why they continued to strive to maintain their organizations despite the adversity they described, I received a variety of responses that led me to group the entrepreneurs in the following way. As shown in Table 10, I categorize four entrepreneurs’ form of commitment as identity, five entrepreneurs’ form of commitment as ideology and two entrepreneurs with only a purely economic commitment to keeping the firm alive and pursuing aspirations. As indicated earlier, all firms in the study pursued the economic goal of making a profit, however in all but two cases (Azalea and Dogwood), the

entrepreneurs expressed other reasons for their commitment to keeping the organization together and were oriented toward another aspiration in addition to the economic one. This is highly consistent with survey research about the reasons why entrepreneurs choose to *start* new ventures, which consistently indicates that economic goals are not predominant (e.g., Carter, Gartner, Shaver, & Gatewood, 2003). It also foreshadows the objects of the commitment – the aspirations – and it is important to note the complexity of aspirations here.

Table 10: Forms of Commitment - Organization Level Summary

	Forms of Commitment: Organization Level Summary		
	<i>Values-Consonance</i>		
	Identity	Ideology	Economic
Azalea (2)			X
Dogwood (1)			X
Pampas (1)		X	X
Jasmine (1)		X	X
Redbud (2)		X	X
Firethorn (2)		X	X
Holly (2)		X	X
Magnolia (2)	X		X
Nandina (2)	X		X
Juniper (1)	X		X
Camellia (1)	X		X

All entrepreneurs possess at least some type of economic commitment to survival and most are complemented with value-laden commitments. As noted earlier, I did not observe a change in any entrepreneurs' form of commitment during the study and was given no indication that a change had already occurred. From the outset, the entrepreneurs with the identity-based form of commitment started their firms with the intent of creating an

organization based upon values they held as an individual – then and now – in their state of “being.” Of the cases in this study, two survivors and two startups displayed the identity-based form of commitment. Three survivors and two startups displayed ideology-based forms of commitment. In these firms, owner’s values – in the forms of expressed ideologies – were still evolving (in philosophical terms, the owners’ identities were still “becoming”) and they were all, in some sense, struggling to run their firms in ways that were consonant with their evolving values.

Forms of Commitment & Aspirations

The aspiration is the object of the form of commitment; objects are summarized in Table 11. The entrepreneurs are committed to surviving, but also to something beyond just survival. The overall pattern I observed was that entrepreneurs expressed aspirations aligned with their values for the values-consonance forms of commitment and not related to values for the purely economic form. In this section, I describe the aspirations of each entrepreneur.

In the cases of the ventures of the identity-based form of commitment, the venture became a representation of an entrepreneur’s personal being and their aspirations are based on their core values. The first example, Magnolia, was established because the founding entrepreneur witnessed the manner by which his colleagues at the executive management level at his previous employer treated the employees. Their behavior was personally disturbing to him and not something he could support; he had grown up “as a worker” in the plants and was well aware of the “hardships” of the people. He said his fellow executives were “more concerned about their tee-off times than the company.” Additionally, he vehemently disapproved of what he saw as their cavalier and wasteful approach to resources

as he “witnessed hundreds of thousands of dollars being wasted...money flowed.” He characterized the executives by saying, “they were overpaid, uncommitted and financially-driven...and [motivated by] ‘what’s in it for me.’” He reached a point in his career where he decided that the time was “now or never” to strike out on his own and start a manufacturing organization based on his expertise, but to make things right by treating his employees – and all of his firm’s other resources and assets – with respect and careful management.

As part of his identity, he takes the livelihood of his employees just as seriously as he does the livelihood of his own family. Therefore, he is ultimately committed to – and aspires to provide for -- their well-being and long-term employment, which includes keeping his firm alive to be able to support the employees that depend on him. His economic aspiration is to make an honest living to be able to support his employees in addition to passing a healthy business to the next generation; each of these aspirations is a foundational element of his identity.

Nandina is the second example of the identity-based aspirations. The entrepreneur’s passion for starting businesses is embodied in who he is as a person. He is a self-proclaimed serial entrepreneur and prides himself on being the “go-to” person in the town – for knowing everybody, everybody knowing him and being able to solve many different types of problems. His friends have told him that he should charge a fee for just giving out information because, as he said, “I know everybody from one end of the country to the other.” His terms of service – favorable for his operations and strict on the other party – are well-known, but he claims to have never lost any business by making customers adhere to guidelines that allow him to provide good service while earning a profit on every transaction.

This entrepreneur's economic aspiration is transfer a healthy business to the next generation gradually. He still plans to monitor the operations from his retirement location by the camera system he installed around the plant.

The third example of the identity-based aspirations is Juniper. The founder of Juniper aspires to support his local community and takes very seriously the responsibility of hiring additional employees. In addition, he takes pride in being a reliable source of supply to external customers. As other manufacturers were closing around him, he decided to open his own plant to be that steady and secure source of supply, an action described by a stakeholder as an act of service and motivated "by the gentleman that he is." He started the operations to be able to supply his own customers and also saw the opportunity to keep the other people working; he is committed to staying afloat to maintain his own employees.

Finally, the fourth example of the identity-based aspirations is also a startup, TeamSports. The entrepreneur at the helm is passionate about re-employing textile workers in the US, the environment and exposing hypocrisies of "green" marketing. He said, "my advice is to start a business for a cause, not for money...the success of this company won't be measured by how much money it makes. It will be measured by how many people are employed...that's the really important thing about it... If money is the only motivator, it's not gonna be successful. And eventually it will shine through. We've seen what money – how it can affect trying to get the cheapest and we see making the most money as almost the worst effects. So sooner or later everybody's gonna catch on and see what's going on. It might take a long time. But we're trying to be at the forefront of [the change]." He is committed to a crusade to right the wrongs of inauthentic "green" textiles by being transparent in his

operations and proving that textile manufacturing is still a viable venture in the US. Based on his prior experience he said, “I saw kind of the inconsistencies that were going on with the green products, green movement and [became] frustrated with it.”

In identity-based forms of commitment, the way the firm is managed is tightly intertwined with the entrepreneurs’ core values and identity. In contrast, in ideological forms of commitment the entrepreneur is attempting to pursue ideologically-held personal values – which may not be foundational elements of the entrepreneur’s identity – and using the firm as a vehicle for this pursuit. The first example is Firethorn. As a survivor firm, the entrepreneur’s ideological aspirations were triggered by the changes in the current economic climate and his own experiences with the globalization of textiles. He diligently explored moving his operations offshore and went as far as to visit one particular country and meet with potential partners. Following multiple conversations and plant tours, he became alert to several pieces of the process – and ultimate circumstances for manufacturing – with which he was not completely comfortable: moving there “wouldn’t *help* those people. That money wouldn’t be used to improve their lives.” He decided against moving and strengthened his commitment to US manufacturing and providing jobs in his own community. His economic aspiration of making a profit still holds true and complements his ideological aspiration of supporting families in the US through domestic manufacturing.

In the case of another survivor, Holly, the founder began to more aggressively shift his business philosophy toward environmental sustainability when the support of large apparel firms – the customers – began to wane during globalization. The founder even started joining community grassroots efforts to be more environmentally conscious at that time. He

has since been on a personal crusade to integrate the environmental ideology throughout all aspects of the venture. His economic aspiration is to “run a business”, but he does not have high growth aspirations – at least not disproportional or out of sync with the ideological aspirations: “the South is good enough for us” (meaning he needn’t expand beyond this region) because otherwise they fear compromising the environmental component of his business philosophy with transportation-related emissions.

The founder of Redbud refuses to give up – not only because he is committed to making a profit – but because he refuses on ideological grounds to admit defeat from the pressures of globalization. He is committed to manufacturing in the US. This entrepreneur’s career in textiles started as “a money-motivated decision.” As his employer began letting people go, which eventually led to closing all domestic operations, he struck out on his own. Though he did not start out in manufacturing, the entrepreneur started manufacturing in “self-defense” with a situation similar to Juniper – so that he could control a predictable supply of goods. His sources of supply were consolidating and moving around the world, and ultimately beyond his reach. His ideology for maintaining US operations is a reflection of the values of his primary mentor who, in this entrepreneur’s opinion, “would roll over in his grave” to know the company had moved overseas. The founder of Redbud says, “I’m stubborn – just as he would have been – about staying here.”

The fourth example of ideological aspirations in the sample is Pampas. He expresses aspirations for staying committed to keeping his startup afloat because, “We’ve convinced ourselves we’re real. I didn’t spend [a number of] years building this business – building my reputation – to give up.” He repeatedly mentions his reputation in the industry and his

relationships with colleagues. His economic aspiration of being a successful entrepreneur supports his ideological aspiration of living up to – or continuing to take pride in – his reputation in the industry.

The founder of one more startup, Jasmine, is the fifth entrepreneur of the sample who expressed ideological aspirations for maintaining his business. He started his business after drawing his first entrepreneurial endeavor to a close, and with the ideological intention of continuing to be a successful entrepreneur – only this time in the textile industry. Drawn back to his hometown by the devastation of globalization, he started his organization with aspirations to revitalize the industry and available workforce by re-employing accessible expertise and talent. He organized his company to being committed to exploring these options as well as being committed to finding ways to make a profit.

The two entrepreneurs with purely economic commitments are Azalea and Dogwood. Neither entrepreneur expressed commitments beyond financial gains. Azalea started his venture for lack of another career opportunity and has maintained operations for a number of years. Dogwood started his organization as one in a series of entrepreneurial ventures. His aspirations have from the beginning been focused narrowly on growing a profitable venture.

Table 11: Aspirations (Objects) of the Form - Summary

	Forms of Commitment		
	Values-Consonance		
	Identity	Ideology	Economic
Azalea (2)			it's a fun place to work
Dogwood (1)			To grow the business
Magnolia (2)	disagreed with treatment of employees, greed is not good		keep the business healthy for the next generation
Nandina (2)	pride in being the "go-to" entrepreneur of the community		keep the business healthy for the next generation
Juniper (1)	"gentleman", keep the people working		"forced" into it, but it supports other operations; To run a conservative business with the cash in his pocket
Camellia (1)	"start a business for a cause, not for the money" (rebuild employment, sustain the environment)		venture growth
Firethorn (2)		provide jobs for the middle class in the US	continues to grow one business to support another
Holly (2)		personal crusade; all things green, but still becoming green and learning how to balance the people, environmental stewardship and profit	regional demand is sufficient, rather than high growth and expansion aspirations
Redbud (2)		diligent about keeping domestic manufacturing	entering textiles was a money-motivated decision
Pampas (1)		reputation to protect, not willing to give up	no back-up plan
Jasmine (1)		made in the USA, in the local community, environmental concerns	adventure of being successful

Forms of Commitment & Aspirations – Adaptive Aspirations

As described in the overview of the model of this theory, aspirations may adapt in two directions: the focus may change between aspirations or the level of an aspiration may increase or decrease. I observed changes in focus in all five ideology-based cases, shown here in Table 12; as the entrepreneurs were “becoming” they were able to change their focus between aspirations as one aspiration became more challenging to achieve. Holly, Firethorn and Redbud changed focus to the ideology-based aspirations and also increased the level of that aspiration while Pampas and Jasmine also changed focus as a result of experiencing disappointment in one aspiration, though the increases and decreases – and in one case, no change – in aspirations levels were a bit different. Entrepreneurs with identity-based aspirations demonstrated increases in at least one aspiration level, although they did not demonstrate changes in focus. They were more set towards their course to achieve their aspirations – closely aligned with their identity – and challenges and constraints appeared to be less significant for impacting their focus. Although they did not exhibit changes in focus, I did observe increases or decreases in at least one of the aspirations of all the cases, even in cases where one aspiration was not challenged.

The first example of a change in focus is Holly. The founder began to move his focus between aspirations just before regulations changed to promote textile globalization; however, as a survivor, the change became increasingly relevant in the years after 1994 and has been justified with the impacts of the current economic crisis. While aspirations for making a profit have taken a beating as demand for the product have decreased during the economic crisis (his customers are tightening their budgets), Holly’s aspiration for building

an organization focused on the environment and the people as well as profit has moved to the forefront as the focal aspiration. He is able to concentrate on two of the three aspects – the people and the environment – until demand returns for their products. Not only did the focus of his aspirations change, but each individual aspiration also increased or decreased. As integrating environmental sustainability became the focus, his prior economic aspiration for making a profit – a very large one, at that – decreased. He views expanding beyond a specific radius of their manufacturing operations as a violation of their focal aspirations which includes creating local jobs to demonstrate social responsibility, reducing their carbon footprint for environmental stewardship and seeking modest market share for fiscal responsibility. The founder said that filling demand “in the South is good enough for us” (representing a smaller market than the one to which they had previously aspired). Profitability is a component, but the aspiration to be a top supplier as in the past when they supported the large apparel manufacturers and won an award for such performance, has decreased.

Next, from the outset, the focal aspiration of the founder of Firethorn was to build a profitable business. The level of this aspiration remains constant (no change because the business is still doing well) and yet the level of another aspiration has increased in response to the reduction of middle class jobs – that he attributes to the combination of the globalization of textiles and the economic crisis. While he moves his focus to generating jobs and supporting middle class families, he has deemphasized the aspiration of generating a large profit. He said, “What we can do is create jobs, because remember for every job you

create, you're going to affect four people, and that's important to me.” He retains the same level of the economic aspiration even as his ideological aspiration level increases.

I observed that the focal aspiration of the founder of Redbud – of being extremely profitable – has also been put on hold while he figures out how to handle the combination of industry globalization and decreased demand as a result of the economic crisis. Although his business is *not* doing well, he still retains his “money-motivated” aspiration but perhaps at not quite the same aspiration level as when the business was doing well. His aspiration to keep his manufacturing operations afloat has increased and has become his focal aspiration as his self-proclaimed stubbornness drives him to survive in US manufacturing.

Somewhat differently than the three previous changes in focus, the founder of Pampas changed his focus to a long-standing high aspiration to build and protect the reputation of the venture – and his personal reputation. He offered stories of “making money hand over fist” and thus, pursuing aspirations of continued growth and profitability by investing in new manufacturing infrastructure. Things were going well until, he said, “our business followed Wall Street.” In response to the global recession, the economic aspirations for high growth decreased. The founder has managed to keep his organization alive based on the assumption that “we’re real, our customers appreciate us” and this has become his focal aspiration rather than focusing on growth. The founder’s aspiration level regarding his reputation remains high and he refuses to fold because of the economic conditions.

Finally, the founder Jasmine originally started the venture to provide jobs in his declining hometown and be a steward of the environment in doing so – and to continue as a successful serial entrepreneur. However, he encountered challenges to his ideological

aspiration because of the local regulatory environment, and thus it declined. He is still clinging to his economic aspiration for creating a successful venture – with him in the picture or perhaps without him, also indicating a decrease in the economic aspiration even though it has become the focal aspiration. The entrepreneur’s aspiration for revitalizing the town has faded and he is simply finding ways to minimize his losses and still perhaps generate growth in the venture.

The four entrepreneurs with identity-based aspirations expressed an increase in most aspirations. In two cases, as competitors were falling by the wayside (in the cases of Magnolia and Nandina), they maintained their focus on aspirations that defined their identity and viewed challenges or obstacles – they both acknowledged – as insignificant and such conditions appeared to only increase the level of their aspirations. Nandina offered, “2009 was tough; we never said we would shut down and we never considered bankruptcy.” Similarly, Magnolia said, “We haven’t had setbacks and struggles other than the last year [with the banks]; when I went into business I said I would avoid stupid decisions that will cause failure.” In the other two cases, they were able to create opportunities (Alvarez & Barney, 2007) despite the low environmental munificence and conditions of negative slack and experienced significant increases in demand (in the cases of Juniper and Camellia), and thus, their aspirations also increased, particularly because the ventures are doing very well. In these cases, the entrepreneurs are secure in “being” and fulfilling their position in the world.

Finally, the two entrepreneurs without a values-consonant aspiration or form of commitment experienced both increases and decreases in their aspirations, but in opposite directions. Azalea is content to maintain his current operations until the commercial real

estate market becomes more forgiving. In response to the global economic crisis, he has decided that he would like to exit manufacturing and “just sell stuff” at this stage of his life, thus decreasing his economic aspiration. Dogwood’s economic aspirations for creating a profitable startup have increased, despite setbacks attributed to the environment, but due to steady and increasing demand from customers.

Table 12: Forms of Commitment & Adaptive Aspirations

	Forms of Commitment & Adaptive Aspirations		
	Values-Consonance		
	Identity	Ideology	Economic
Azalea (2)			(decrease)
Pampas (1)		(change in focus only)	(decrease)
Jasmine (1)		(decrease)	(change in focus, decrease)
Redbud (2)		(change in focus, increase)	(decrease)
Holly (2)		(change in focus, increase)	(decrease)
Firethorn (2)		(change in focus, increase)	(no change)
Dogwood (1)			(increase)
Nandina (2)	(increase)		(no change)
Juniper (1)	(increase)		(increase)
Magnolia (2)	(increase)		(no change)
Camellia (1)	(increase)		(increase)

My primary findings regarding aspirations relate to two avenues of adaptation: changes in the focal aspiration and changes in the level of the aspirations. The nature of the forms of commitment shapes the complexity of the aspirations: values-consonant commitments complement purely economic commitments, resulting in multi-faceted

aspirations. Single-faceted aspirations only allow increases and decreases in an aspiration where as multi-faceted aspirations allows a change in focus and each individual aspiration may or may not increase or decrease as well. A change in focus allows an entrepreneur to deemphasize one aspiration that may suffer from environmental shocks or negative slack circumstances.

Behaviors of Resourcefulness

In this section, I will describe each firm's behaviors of resourcefulness, outline patterns of the behaviors across the firms and discuss the ways the behaviors are shaped by forms of commitment – including restrictions and freedoms to test the boundaries of the behaviors.

I gathered information and stories as entrepreneurs described challenges they faced in their day-to-day activities and larger challenges they had encountered over time. This set the stage for follow-up dialogue about how they responded to each of these challenges, provoking conversation regarding their behaviors. I grouped their responses into behaviors of resourcefulness -- *patterned variations of making use of limited resources* – to indicate how the entrepreneurs managed constraints. Three categories of behaviors were prevalent and tied in important ways to resilience; I labeled these “bricolage,” “thrift” and “community.” I went into this study with an expectation of a focused exploration on particular forms of bricolage; I discovered the role of thrift and community in trying to make sense of my data.

I use bricolage, “making do by applying combinations of the resources at hand to new challenges and opportunities” (Baker & Nelson, 2005), as a category that captures behaviors such as tinkering and recombining material resources. This is often exhibited by repurposing

(finding applications for purposes other than those for which the item was originally designed or intended) materials to solve challenges. A “refusal to enact limitations” and engaging in experimentation to explore what can serve as a resource are key components of bricolage (Baker & Nelson, 2005) and I use this idea to explore differences in the boundaries entrepreneurs and managers impose on what they treat as acceptable and unacceptable ways of being resourceful.

The second category of behaviors of resourcefulness is community. Communities of practice (Brown & Duguid, 1991) have been found to assist particularly with learning and innovation. However, in many cases, the entrepreneurs in my study *used* a community, a forum of a shared interest, in a different way: to promote their own ventures and gain market share independent of other firms or individuals in the community that shared some type of similar interest. Such communities of practice that I discovered in my study were built around environmental stewardship and sustainability (organic, green, environmentally conscious, etc.), “Made in the USA” and, in one case, a community related to a specific activity. As described below, entrepreneurs varied in how they were resourceful through use of these communities.

The third category of resourceful behaviors in my study is “thrift.” In contrast to making do through active exploration of ways to combine what is at hand to create new resources, the behaviors I describe as elements of “thrift” relate primarily to behaviors driven by conservative financial management. For example, bootstrapping employs careful, frugal spending including bargain-seeking and the willingness to negotiate good deals and delay purchases. Working “harder and longer” is another common behavior that I include in the

thrift category along with cross-training practices that allow using the same person to do multiple jobs. Finally, I include as an element of thrift attempts to seek subsidies – from any source – because these allow firms to conserve their cash resources. Overall, behaviors that attempt directly to minimize expenses and increase – or at least conserve and frugally manage – cash-on-hand are grouped in this category.

Behaviors of Resourcefulness & Boundary Conditions

Though the three categories – bricolage, thrift and community – allowed me to categorize my observations of the behaviors of resourcefulness and ways that the entrepreneurs and members of their organizations managed negative slack, I also observed that when faced with constraints, some entrepreneurs tested what I term “boundary conditions” of some of the behaviors to achieve gains – or at least survive. One of the most important observations about patterns of behavior is that the manner in which entrepreneurs behaved resourcefully was significantly shaped by the form of commitment.

Entrepreneurs with an identity-based commitment were not only less likely to change the focus of their aspirations, but they also appeared to be more restrictive in the behaviors they demonstrated and the boundary conditions of each of the behaviors. This was due to a strong connection between the entrepreneur's personal identity and engaging certain aspirations and behaviors could potentially be perceived as violating their identity. In contrast, entrepreneurs with an ideological commitment were able to take greater liberties in a variety of resourceful behaviors. They explored the boundaries of each behavior more freely, and without risk of violating their “being” because they were still “becoming” and had yet to solidify the behaviors and aspirations that defined their identities. Finally,

entrepreneurs with the greatest flexibility for choosing behaviors and testing the boundaries of the behaviors were those with purely economic commitments. Similar to the ideology-based flexibility, behaviors of the entrepreneurs with purely economic commitments were not restricted to a set of norms tied to personal values, but rather only to common business and industry norms.

In order to illustrate these boundary differences I once more divided two of the broad categories of behavior. Baker and Nelson (2005) claim that bricolage occurs when all elements of their definition are met. Although I observed many instances of bricolage, I also observed a number of cases in which some elements but not all of the elements of bricolage were present. Key components of the definition of bricolage include both the “refusal to enact limitations” and “combinations of resources.” The behaviors often occurred independently. On one hand, I found behaviors that could potentially violate the values – of the entrepreneurs, organizations or stakeholders – and therefore group these under the “refusal to enact limitations” subcategory. On the other hand, I group behaviors of tinkering, repurposing resources to be used in situations they were not originally designed to be used for or recombining resources to solve challenges (i.e., “making do”) under the “recombine” subcategory.

Second, the community category captures many different ways the entrepreneurs and organizations engaged with a group comprised of individuals and/or organizations that hold similar interests to each other – and not necessarily matching the interests of the venture in my study. Therefore, I divide the community category between “instrumental association” and “authentic association” subcategories. In the instrumental subcategory, I group together

the behaviors that appeared to use the community to gain an advantage – either over competition in the market or in the eyes of members of the target community. These behaviors were not driven by malice, but represent an exploration of the boundaries of the community as the ventures in my study were trying to find ways to participate to achieve some type of competitive benefit for their organization. Instrumental uses of community were relatively calculated attempts to gain advantage by being seen as a community member or supporter of the community. In contrast, authentic uses of the community were driven by a more holistic sense of alignment with the values and goals of the community. While this authentic association may or may not have been the primary intention, the behaviors were driven at least in part by shared doctrinal values.

Finally, while I divided bricolage and community into subcategories, I did not observe meaningful subcategories of thrift behaviors. I did, however, observe differences in the *causes* of thrift. Some entrepreneurs exhibited behaviors of thrift because of close ties to their values or principles and others indicated that their thrift behaviors resulted from learning from consequences of poor judgment, circumstances that forced this behavior or based on prior experience in another firm.

Overall, in the analysis, I use the “refusal to enact limitations” and the “instrumental” subcategories to capture and explain the boundary testing behaviors and highlight specific instances where thrift was a learned or forced behavior. The specific behaviors for each subcategory are shown in Table 13.

Table 13: Behaviors of Resourcefulness - Subcategories

Behaviors of Resourcefulness - Subcategories				
Bricolage		Thrift	Community	
Refusal to Enact Limitations	Recombine		Instrumental Association	Authentic Association
behaviors that test legal boundaries of “making do” and behaviors that explore violations of values – of the entrepreneurs, organizations or stakeholders to solve challenges by using resources at hand	behaviors of tinkering, repurposing materials to be used in situations they were not originally designed to be used for or recombining materials to solve challenges by using materials at hand	behaviors such as working harder, work longer hours, engaging in cross-training and careful employee management, seek subsidies such as grants or government backed loans and utilize bootstrapping	behaviors, though not malicious, that appeared to use the community to gain an advantage – either over competition in the market or in the eyes of members of the target community	behaviors connected to the interests of the community and the aspirations and forms of commitment align with these interests

As shown in Table 14, the left column of the bricolage and community subcategories represents taking greater liberties and exploring the boundaries of each behavior, construed as “malleable” interpretations of the limitations around behaviors, and the right column represents a close adherence to “strict” interpretations of the limitations around behaviors. If the entrepreneur or organization did not engage in the behaviors, this is noted as “n/a” – and will be explained per venture in the next section.

Table 14: Behaviors of Resourcefulness - Organization Level Summary

	Behaviors of Resourcefulness - Organization Level Summary				
	Bricolage		Thrift	Community	
	Refusal to Enact Limitations	Recombine		Instrumental Association	Authentic Association
Azalea (2, <i>economic</i>)	X	n/a	X	n/a	n/a
Pampas (1, <i>ideology</i>)	X	X	X	n/a	n/a
Jasmine (1, <i>ideology</i>)	n/a	X	X	X	X
Redbud (2, <i>ideology</i>)	n/a	n/a	X	n/a	n/a
Firethorn (2, <i>ideology</i>)	n/a	n/a	X	X	X
Holly (2, <i>ideology</i>)	X	X	X	X	X
Dogwood (1, <i>economic</i>)	X	X	X	X	X
Nandina (2, <i>identity</i>)	n/a	X	X	n/a	X
Juniper (1, <i>identity</i>)	n/a	X	X	n/a	X
Magnolia (2, <i>identity</i>)	n/a	n/a	X	n/a	X
Camellia (1, <i>identity</i>)	n/a	X	X	n/a	X

Behavioral Boundaries: Identity.

Two survivors (Nandina and Magnolia) and two startups (Juniper and Camellia) demonstrate identity-based aspirations that complement the economic aspirations and their behaviors illustrate the pattern in which identity-based commitment places close boundaries on what is acceptable as a resourceful behavior. Descriptions of the individual behaviors are listed in Table 15. Among this set of cases, Magnolia is only firm that does not demonstrate all resourceful behaviors, but his behaviors are congruent with his identity. He does not engage in bricolage, tinkering or recombining resources to “make do.” This entrepreneur operates “by the book” and generally uses established rules to guide his behaviors. He is focused on thrift as a principle by which he manages his personal finances and his business finances are managed in a similar manner. He witnessed great amounts of wastefulness with his prior employer and he manages his organization to deliberately avoid those behaviors. He mentioned, “We hired consultants to tell us about our problems...and they had to interview the employees to tell us what we already knew [about ourselves].”

This entrepreneur’s personal relationships were also the basis for two complementary ventures and he was able to create mutually-beneficial deals with others. In any business transaction, he always made sure both sides of the deal were being treated fairly and with a “good deal” for the organization and his employees. He believes in working hard and that those around him should work just as hard. While he is happy to create new products and explore business opportunities with some contacts – as was a primary source of his own business expansions – he must feel like he is met at least halfway for the amount of effort going into the work. Vacation time, prior to recent changes in his business structure, was out

of the question; he considered it his responsibility to be at work – with the people – every day.

He actively participates in the local, surrounding community in which his business operates, which supports his identity-based aspirations of providing employment and taking care of the people in the area. On multiple occasions during the peak of globalization efforts, Magnolia was able to “rescue” employees as he heard through community connections that facilities were closing. He expanded his operations and “changed the name on the building” directly before a lapse in employment for the people. The entrepreneur described one such occasion where he visited the facility to introduce himself to his new employees and recounted his apprehension, “We went to them [their facility] because we didn’t want them to see how small we were...But we had the potential to save all those jobs.” He then managed to build his demand to support the expansion.

The founder of Magnolia and a business partner decided to sell one business (after he stabilized all of his ventures during the economic crisis); in the interviews with potential buyers he made certain that his people would be retained and finalized the sale with contractual obligations to protect that stipulation. An element of authentic community association is has shaped Magnolia’s approach because he sees what he does as a “domestic manufacturing operation” and strives to maintain this distinction (i.e., “Made in the USA). He already has a strong sense of the local community and reflected about the start-up of the firm, “our previous relationships paid immense dividends that I didn’t realize at the time.” Many members of the community supported the startup, growth and survival of his venture during tough times. Recalling struggles during the startup of the firm, he said, “We were

highly leveraged....And fortunately, many vendors extended credit by virtue that I knew them from my past experience. Even though we were a new company, they knew me personally and trusted us enough to extend us credit.” His emerging community of practice – and association with “Made in the USA” – builds upon his existing association with the local community.

In the next case, the founder of Juniper – and his employees – demonstrated behaviors across the three categories of resourcefulness, although the behaviors of the actors inside the organization most strongly reflect thrift and bricolage. In keeping with his identity, the founder intends to diligently control the growth of his operations, manage “by the cash in my pocket” and do this in ways that still allow him to support his customers. The founder learned from prior experience with other organizations – during the destruction of the traditional textile industry – to be wary of “false” peaks in demand. He wants to be sure that his organization’s responses – hiring new employees, building equipment capacity – to increases in demand are based on long-term growth opportunities, and to avoid being fooled into fixed cost commitments by short-term surges that could later harm his cash flow and the viability of his organization. He purchases old equipment and refurbishes it as cash and time are available. A relative, who is “mechanically inclined”, pitches in at times to build machine parts for just a fraction of the price he would otherwise have to pay. He intentionally runs a lean staff and is very hesitant to hire anyone because he takes very seriously the responsibility for the family he would be supporting. The organization’s participation in the “Made in the USA” and environmental sustainability communities is growing as demand for

their products is also growing, but at a carefully controlled pace based on the entrepreneur's careful and deliberate discretion.

Camellia is a case in which the founder, in keeping with his identity, exhibits community and thrift behaviors far more than bricolage. Everyone in the Camellia organization performs multiple jobs and the entrepreneur is willing to do any task to ensure deadlines are met. Although their first product was successful, they were forced to learn from expensive mistakes with an unsuccessful follow-up product, demonstrating "learned-thrift" with future product development strategies. They have engaged in an authentic manner with a community of local manufacturing organizations gathered around a goal of revitalizing the textile industry through producing and marketing "Made in the USA" products; the founder explicitly expressed aspirations to assume personal and organizational responsibility for maintaining and increasing jobs in existing local organizations. This is instead of the alternative – as he sees it – to create a competitive organization that would then take away from the performance of established firms. That is, although he believes he could outcompete elements of his supply chain, his goal is to strengthen them and his own firm simultaneously. However, the aspiration to provide jobs for the local communities is only part of the identity-based commitment; the other aspiration is to restore the environment – or at least minimize the resource consumption and degradation. Camellia is making strides toward achieving these aspirations – tied to the identity of the firm – and demonstrating authentic community association and thrift behaviors to do so.

Finally, I observed bricolage, thrift and community behaviors in my study of Nandina. For years, he has been purchasing equipment from closing facilities that he can then

customize or use for parts to support his identity-based aspiration: to be the “go-to” entrepreneur of the community. The founder enjoys customizing and building customer-specific equipment and takes great pride in helping others create products for their own customers. He is an accomplished, self-taught mechanic and appears to revel in the challenge of “figuring out” how to make things. Before he purchases any equipment, “I talk to my friends and borrow theirs first and go from there” to make sure it will do the job and to see if he should make the investment.

From providing so many customized services to such a wide variety of clients he also learned to set and to live by terms of service that protect his margins against a variety of uncertainties. For example, because on several occasions he was left holding inventory of input materials for customers for whom he was doing limited production runs, he never invests any of his own money in materials inventory for any customer and if they require materials outside the basic components Nandina provides, “they have to supply it.” For any project, and particularly a new product sample, “the customer supplies all the materials. The customer will receive a sample [10-14] days after *all* the materials arrive. I mean *all* the materials.” Though these terms are quite strict, he claims – *vehemently* – to have never lost an existing customer or potential customer because of the terms. Further, if the customer does not like it, “then they can find somewhere else to do business.” Cross-training is also big deal at Nandina. The founder said, “We don’t hire anyone to do just one job” and rotates employees to utilize multiple skill sets. He constantly seeks the expertise of local universities and community colleges in addition to community development opportunities. He supports his local community and increasingly, the “Made in the USA” community.

An interesting distinction arises between the founders of Magnolia and Nandina. Their identity focused aspirations have increased and they experienced “no change” in their economic aspirations – to pass along healthy organizations to the next generation. Their behaviors to go about doing so, however, were quite different regarding their employees; Nandina laid off over half of his staff to keep the venture viable, whereas Magnolia at one point reduced hours and changed work days to keep almost all of his employees on board. The reason for this difference can be directly explained by distinctive differences in the identity-based aspirations of these two entrepreneurs. In the case of the founder of Magnolia, a major aspiration is to provide for his employees and it would be a violation of his identity to release large numbers of employees. On the other hand, Nandina’s behaviors are not a violation of his identity because he can still fulfill his aspiration of being the “go-to” entrepreneur while he behaves in a way that cuts his employees jobs but leave his business for the next generation.

As I noted earlier, identity-based commitments restrained these entrepreneurs from engaging in “boundary-testing” behaviors. All participated in an “authentic association” with at least one type of community and did not experiment with more instrumental use of their engagements with these communities. Two of the four learned deep lessons about thrift based on mistakes within their own organizations (Nandina and Camellia); the other two firms (Magnolia and Juniper) observed wasteful practices earlier in their careers with other organizations and were careful not to repeat the behaviors with their own firms. Finally, only two of the four firms demonstrated bricolage behaviors and these were focused on “recombination” rather than on the “refusal to enact limitations.” Based on interviews with

the entrepreneurs and direct observations of the organizations, tinkering with equipment and materials appeared to itself be closely aligned with the identity of the entrepreneurs of Nandina and Juniper. Thrift was an important part of the founder of Magnolia's identity and consequently his firm did not attempt to veer from strictly frugal, procedure-based behaviors.

Table 15: Behavioral Boundaries - Identity

	IDENTITY				
	Bricolage		Thrift	Community	
	Refusal to Enact Limitations	Recombine		Instrumental Association	Authentic Association
Nandina (2, <i>identity</i>)	n/a	Self-taught mechanic; Purchase old equipment from closing facilities	hard work; Cross-training; Seeks expertise of local agencies; Assists entrepreneurs with NPD; Laid off majority of staff; Tried extra work shift; Terms with customers	n/a	Increasingly Made in the USA; Local community activist
Juniper (1, <i>identity</i>)	n/a	Purchase old equipment from closing facilities, Refurbish as needed; Relative as mechanic	hard work; Controlled growth; Intentionally lean staff; Careful hiring; Assists entrepreneurs with NPD; learned through others; Learned from prior employer	n/a	Made in the USA, Environment stewardship, Textile industry revitalization
Magnolia (2, <i>identity</i>)	n/a	n/a	hard work; No waste in materials or money; Mutually-beneficial deals, Seek subsidies and grants; learned through others; Learned from prior employer	n/a	Increasingly Made in the USA; Local community activist
Camellia (1, <i>identity</i>)	n/a	n/a	hard work; Intentionally lean; cross-training; Utilizes existing (others) expertise and capacity for NPD; Learned from new product failure	n/a	Made in the USA, Environment stewardship; Textile industry revitalization

Behavioral Boundaries: Ideology.

Distinct patterns of behaviors emerged among the entrepreneurs with ideology-based forms of commitment: all engaged in thrift and if the firm engaged in authentic association with a community, they also used instrumental behaviors toward that community. Although bricolage patterns were more difficult to detect across all cases, bricolage was a regular behavior of some entrepreneurs. Altogether, the entrepreneurs with ideology-based forms of commitment demonstrated more flexibility in the types of behaviors they exhibited and also with the boundary conditions of each behavior compared to the entrepreneurs with identity-based forms of commitment, as shown with examples in Table 16.

The founder of Pampas exhibits a wide variety of thrift and bricolage behaviors. He has “enough” and lives a modest lifestyle on principle. When Pampas has employees, cross-training is essential; as the founder noted, “you do what you have to do” to make things happen. The founder learned valuable lessons about thrift by becoming over-dependent on one customer, overinvesting in infrastructure and hiring too many employees during the “good times” and as a result, now demonstrates careful customer, employee and financial management. He said, “Until you lose your biggest customer, you don't really have a business 'cause it's easy; it's easy when you have somebody who is giving you at least 80 percent of your operating expenses.” He is working harder and longer than ever before; he is doing everything basically by himself to survive because his “business followed Wall Street” as did unfortunately the capacity to retain his employees.

The entrepreneur repairs and customizes equipment and goes to great lengths to tweak equipment and services to make the customer happy. He recounted a story of an early

customer request in response to which he immediately assured the customer they had arrived at the right place and agreed to deliver – despite not having the slightest clue how to do it or what to charge because it was something he had never tried before. He then had to recombine and tweak equipment to deliver to the customer. This is one example of bricolage and this behavior – to say “yes” to things he has never tried before – has become a “standard” part of generating revenue. In other stories repeated about customer interactions (or former customers) on multiple occasions, he describes trying to “educate” his customers into signing on for new business with him by explaining how their current process is unnecessary, irrelevant and broken. He said, “and sometimes they’re not my customers anymore.” He forges ahead to build his reputation in the industry by saying, “We convinced ourselves we’re real...we’re constantly trying to convince our customers that they need [what we have to offer].” In a recent “plea” to the customer base, he expressed an interest in serving “any and every need” of a potential customer. In our later conversations, he did briefly mention supporting US manufacturing, but has not demonstrated these behaviors (and is not, therefore listed in Table 16). Indeed, partly out of his frustration at not yet regaining traction in the US market, he has begun attempting to grow into serving non-US manufacturers.

The founder of Jasmine described behaviors across *all* categories and subcategories of the listed behaviors of resourcefulness. He engages in some bricolage behaviors to use what is at hand: he shares office and manufacturing space with another business owner and utilizes the other firm’s equipment when it not in use by the other firm. His practices thrift: in his immediate vicinity, he runs a “one-man” show with strategically placed sales associates in other regions. He bootstrapped the startup of the venture with earnings from his prior work

and operates on a frugal budget. The entrepreneur has also learned several valuable lessons in the current venture including hiring several high-level employees very soon after startup – and later firing them – and was even threatened by a “temporary partner” who he claims was attempting to “steal the business out from under me.”

Mostly, the founder appears to focus on associations with both the local community and the environmental sustainability community. He originally started his organization to pursue local and domestic manufacturing with an aspiration to support and rebuild his hometown. He sought government grants and funding to revitalize the industry, but ran into challenges with logistics and stipulations of the grants. While his commitment to support local manufacturing included sourcing his primary products in the US and preferably the southeast, his frustration with the inflexibility of the traditional textile firms that were his suppliers had led him to source several items from a non-US source. This refusal to enact the limitation implied by his commitment to local sourcing and the local community began as experimentation with the boundaries of what he considered acceptable behaviors but during the period of my observation has moved quickly towards becoming his new norm. During my most recent conversation with this founder he was quite eloquent and thoughtful about the superiority of foreign suppliers and the resistance of “old time” textile firms in the US to adapt to customer needs. Not only have his ideological aspirations given way to economic goals, he has moved toward a more instrumental association with the community as he attempts to educate his customers and potential consumers by “guilting” them into buying his goods. When he started the “persuade through guilt” strategy, it was based on both US manufacturing and the environmental considerations; now, the strategy is not as holistically

focused on both, but on the small pieces of the US manufacturing and environmental advantages he has retained.

Redbud's management philosophy is tightly connected to Lean Manufacturing principles (Womack, Jones, Roos, 1990) and therefore, views anything that is not part of the plan as "waste" which he consistently tries to shed from his facility; his resourceful behaviors focused primarily on thrift. He discussed cross-training to increase efficiency in the plant and efforts to "recycle" materials through his plant and completely "wear out" an item before discarding it. While working for a former employer, he recognized inefficient operations in both the business and the manufacturing operations. He told his former boss one day, "You don't need me doing [my current position]; you need me to clean up your company." After several years of the inefficiencies, he decided to start his own firm. In doing so, he implemented the lessons he learned at his former employer including controlling the SKU (stock keeping unit) proliferation of the product portfolio that enters production.

The founder's commitment to persevere and beat the competition is increasing as his intellectual property is infringed upon by offshore manufacturing who repeatedly "knock off" his patterns and he loses customers to the resultant undercut prices; the founder is still learning ways to avoid this problem. He does not participate in a community of any type even though – because of how he operates he has the opportunity to promote "Made in the USA." He said that the majority of the end consumers in his price point "don't really care" about that aspect; he believes that as long as it's cheap, they will buy it from any source. Therefore he appears to see no value in promoting himself as a member of the pro-domestic

manufacturing community – although some of his direct customers that represent a very small segment of business do participate are activists in this “cause.”

The founder of Firethorn is beginning to associate with a community of practice as his ideological commitment to support US manufacturing grows. He is attempting to increase the demand for his products through education tactics; he chastises offshore manufacturing conditions – including through the use of graphic images of forced labor – and contends that offshore US operations do not help with economic growth in developing economies. The founder believes this based on his first-hand encounters as he explored moving his production offshore, but decided against it when he realized he would rather help people in the US by providing them jobs rather than “padding the pockets” of what he saw as corrupt authorities offshore. Outside of beginning to participate in this community, his resourceful behaviors are mainly focused on thrift. For example, he purchases old equipment and stores it in the “graveyard” to either refurbish for later use (while being very clear that this isn’t just hoarding behavior and insisting, “We don’t buy junk”).

Finally, behaviors at Holly epitomize bricolage. The founder builds and modifies all equipment and gadgets for production – including basic repairs and installations of infrastructure for the plant. He is the self-proclaimed “tinkerer” of the group. Various and sundry materials are stored around the facility because they will be useful at some point, and this also includes a stockpile of chemicals used “in the old days.” This stock exists because the founder claims there is no market that will take it off their hands; however, they “hardly ever use it anymore” although keeping it on hand – it is soon to be banned for most uses and is anathema to sustainable approaches to manufacturing – suggests some willingness to

experiment with around the boundaries and limitations of sustainability practices and values. This is a relatively clear example of the “refusal to enact limitations” characteristic of bricolage.

That behavior is important because of its relation to the community in which the founder participates: environmental sustainability. The founder is committed to implement a business model that supports social justice, economic prosperity and environmental stewardship. He promotes domestic – and local – manufacturing with a minimized carbon footprint. Recently, however, Holly added garments manufactured offshore to the firm’s product selection. The founder rationalized the decision to customers and asked for understanding for taking this step to provide products at lower prices to help weather the recession. In addition to this behavior, and similar to one demonstrated by other entrepreneurs, Holly has taken to “educating” associates into becoming customers. He said, “We’re not perfect, but we do work on it.” Holly is focused on teaching the business owners in the community about products that create the risk that a green reputation will be sullied through stakeholders’ “discovery” of violations. The effects of adding products produced offshore and using education tactics – in effect, refusing to enact limitations and perhaps beginning to transform an authentic affiliation with a community towards a more instrumental association – are unclear at this point.

Finally, Holly’s founder expressed a commitment to cross-training and utilizing his employees for their greatest capacity. He said, “If one person out there does fewer than two jobs, then they’re not very valuable. If someone does two, then they’re valuable, if someone

does three, they're extremely valuable, if someone does four, then they're almost irreplaceable. It's much more productive that way and it's a lot more flexible."

Table 16: Behavioral Boundaries - Ideology

	Behaviors of Resourcefulness: Organization Level Summary				
	Bricolage		Thrift	Community	
	Refusal to Enact Limitations	Recombine		Instrumental Association	Authentic Association
Pampas (1, ideology)	Added international customers; Education tactics with customers; mass pleas for business	Tinkers with improvement around plant	hard work; Cross-training; Bootstrap expansions (now); Frugal philosophy; Extend and negotiate loan terms; Laid off most staff members – hired too quickly; Invested in costly infrastructure became depended on one customer	n/a	n/a
Jasmine (1, ideology)	Added apparel made offshore to product line	Shares space and equipment	hard work; Seeks government grants; Bootstrap with personal savings; Hired and fired several potential employees too quickly	Education tactics	Made in USA; Environment stewardship; Textile industry revitalization
Redbud (2, ideology)	n/a	n/a	Lean manufacture principles; Controlled product selection; Bootstrap with personal savings; learned to incorporate IP protection	n/a	n/a
Firethorn (2, ideology)	n/a	n/a	Purchased old equipment for later use; Refurbish as needed	Education tactics	Made in USA
Holly (2, ideology)	Added apparel made offshore to product line; Mass pleas for business	Builds own equipment; Tinkers with improvement around plant	hard work; Cross-training; seeks good deals; Seeks expertise of local agencies; Bootstrap with personal savings; Laid off large number of employees; Learned from doing “green” backwards; Became dependent on large companies	Education tactics	Made in the USA; Environment stewardship; Local community activist

Behavioral Boundaries: Economic.

Two firms exhibit purely economic commitments: Azalea (survivor) and Dogwood (startup), with a variety of behaviors of resourcefulness shown in Table 17. As noted earlier, the aspirations of these entrepreneurs are at opposite ends of the spectrum and this is demonstrated in their strongly contrasting selections of behaviors.

From the outset, Azalea demonstrated bricolage behaviors that fall into the “refusal to enact limitations” subcategory. The founder is willing to test the boundaries of normal and “acceptable” behaviors – even to the extent that there could be legal repercussions (or at least fines) if discovered. Changes in industry regulations require that he overhaul his production system, which he plans to do at some point, but would rather exhaust his current set of supplies in the current setup prior to making the drastic changes. He has chosen a slow route to adopt the regulations, but appears fairly comfortable with assuming responsibility for violations – and consequences – that may incur.

He demonstrates thrift through cross-training, using inexpensive and temporary labor, buying inputs based only on price holding little inventory. He learned from past experience not to hire people to cover changes in demand but has decided that it’s more efficient to just call a colleague and send the work to him and to contract out the work. In general, he is mostly just interested in maintaining a profit. He seems somewhat disengaged from the process, though. He has recognized a substantial opportunity to grow his customer base – which he described as a good idea, just not something he feels he has the time or energy to pursue.

Dogwood, on the other hand, is aggressively pursuing profits and exhibiting nearly every resourceful behavior I observed throughout the course of the study. The entrepreneur demonstrates thrift by actively pursuing government backed loans and negotiating for “good deals” on infrastructure. The founder bootstrapped the startup of the organization and continues to grow the company with the cash flow of the firm. As he described early startup growth, “We gave ourselves a huge slug of expense [recently for infrastructure changes]. You know, I'm still sweating.” He has experimented with adding shifts, which has not worked out as planned for a variety of reasons. As a result, the founder has learned to be quite careful with hiring and capacity planning practices.

The founder is a self-taught mechanic and bricoleur and – as a result of starting this venture and utilizing unpredictable machinery – fixes equipment and other issues around the plant as necessary; old equipment is used for parts for newer equipment as well. One major stumbling block to the growth of the organization has been the infrastructure for manufacturing and as a result, the founder demonstrates the refusal to enact limitations by finding ways to procure the capacity that he needs to be able to serve his market. In some cases, he has constructed a creative supply chain that crosses several countries to gain access to specialized skill sets (equipment repair) and has taken it upon himself to learn those skills as well – as the experts make the repairs on his equipment. This has allowed the organization to get by so far, but the founder is contemplating other models to create a more reliable manufacturing base.

Finally, involvement with the community that engages most of Dogwood’s customers has turned out to be a double-edged sword. Members of the community overlooked poor-

quality products as the organization started up. The customers were willing to work with Dogwood until they smoothed out the kinks in the system. However, as the organization has expanded, those initial “forgiving” customers have retained their expectations of highly personal customized service. Being “overembedded” in this community (Uzzi, 1997) has become a liability with the demanding customers, but most of the community participation is still an asset. The entrepreneur participates with authentic and instrumental associations: he genuinely appreciates the aspirations of some of his customers, yet his primary aspiration is to build a successful, profitable organization. He is extremely careful to nurture the community and cater to their needs – within reason – and continues to offer new products and services to further build the community of interest, in the belief that this continues to be the primary engine of the firm’s growing profits.

Nonetheless, what began as authentically engaging the customers as part of “getting through” the startup trials and tribulations seems to be evolving into more instrumental associations as the organization continues to grow. For example, the founder has removed the original customer service representative from that position. With this change, he was quick to point out that, “I consider customer service to be the most important marketing activity that we do.” This is in an attempt to create a “more professional” positioning with the customers and to leave behind the sense that interactions with customers are like friends talking to friends. He said, “It will give people a broader sense that there's actually an organization and not just people that they can ask on the other end.”

Table 17: Behavioral Boundaries - Economic

	Behaviors of Resourcefulness: Organization Level Summary				
	Bricolage		Thrift	Community	
	Refusal to Enact Limitations	Recombine		Instrumental Association	Authentic Association
Azalea (2, economic)	Slow to adopt new regulations	n/a	Cross-training; prices raw materials frequently to get best prices; Control over key manufacture process; Contracts out extra work	n/a	n/a
Dogwood (1, economic)	Creative supply chain	Self-taught mechanic; Tinkers with equipment; Purchase old equipment for parts	hard work; Seek government grants; bootstrap growth; negotiate good deals; Careful hiring; Tried extra work shift	Created community	Community of Practice

Overall, the entrepreneurs with ideology-based and purely economic forms of commitment were more willing to test the boundaries of the behaviors than the identity-based entrepreneurs. In addition, the entrepreneurs engaged in behaviors that were most in line with their respective form of commitment.

Entrepreneurial Resilience: Overall Observations

Resilience is the capacity to positively adapt to adverse conditions (Sutcliffe & Vogus, 2003). I observed two primary aspects of resilience, both of which are derived from a combination of aspirations and behaviors. First, I observed a range of orientations toward continuation of the venture from “ready to give up” to “endeavor to persevere.” Second, some ventures were not trying to do anything beyond mere survival, others were trying to make progress toward their aspirations but had yet to achieve results and still others had achieved progress toward their goals and aspirations. Taken together, as shown in Table 18, these variations translated to low, medium and high rating of resilience.

Table 18: Overall Resilience

	Overall Resilience		
	0 - Ready to Give up 1 - Endeavor to Persevere	0 – Not Trying Beyond Survival 1 – Trying with No Results 2 – Achieved Progress Towards Goal	Overall Resilience
Azalea (2)	0	0	0/L
Pampas (1)	0	1	1/L
Jasmine (1)	0	1	1/L
Redbud (2)	1	1	2/M
Firethorn (2)	1	1	2/M
Holly (2)	1	1	2/M
Dogwood (1)	1	2	3/H
Nandina (2)	1	2	3/H
Juniper (1)	1	2	3/H
Magnolia (2)	1	2	3/H
Camellia (1)	1	2	3/H

Entrepreneurial Resilience: Low.

One survivor and two startups rated as “low resilient,” as shown in Table 18. Azalea, Pampas and Jasmine are ready to do something different than their current ventures. Azalea thinks that his manufacturing days have run their course and he is ready for a change in work style. Of the startups, both Pampas and Jasmine have plans for a “next career.” They have not made positive strides toward achieving that next step because they have not found a way to move on in the current economic climate. Pampas needs to hang on to this venture because his “back-up” plan is not available; however, he has not been able to convince his customers to return nor has been able to generate a great amount of new demand with new products. Unfortunately, the founder invested in new infrastructure for the business just prior to the economic crisis and cannot afford to sell it in the current commercial market. Another reason the entrepreneur has not just closed the business is because his focal aspiration is to earn a reputation for having had a successful exit. He is ready to sell and has “a number in mind”, just in case. Jasmine, on the other hand, is seeking investors. He has determined, by talking with a variety of investors, that the amount of financing he has been pursuing from private investors has not been attractive enough – from their perspectives – to make it a deal “worth their time” and effort. Subsequently, he is planning to increase the amount of financing he is pursuing. He has aspirations beyond the current venture and is ready to exit – for the right investment or acquisition offer. Table 19 shows quotes from the entrepreneurs regarding their aspirations and progress.

Table 19: Resilience Rating Quotes - Low

Resilience Rating Quotes: Low		
	0 - Ready to Give up 1 - Endeavor to Persevere	0 – Not Trying Beyond Survival 1 – Trying with No Results 2 – Achieved Progress Towards Goal
Azalea (2)	<p>“In an ideal world...at this point in my life I would like to be able to sell something and not have to make anything. I’d rather be the guy that the Budweiser comes in the back and you sell it out the front. The Budweiser distributorship model is the one I want. Basically, I distribute a product and I don’t have to do anything to it...I’ve always told everybody if I had to do it all over again, I’d just sell something.”</p>	<p>“That’s probably why I haven’t done it yet because once I get it, I know that it’s just gonna turn into a mess back there...So actually when you think about it that way, it’s not that much [material]. It’s just all the time that it takes to [set up the materials].”</p>
Pampas (1)	<p>“You do what you have to do...Actually there is a number that if somebody walked in the door today with a check, I have a number. I have a number. All that number’s gonna do is allow me to start another chapter. It doesn’t allow me to quit. It just allows me to start another chapter. You know, I have no intention of quitting [working].”</p>	<p>“And we’re trying our best to convince people that the more time you spend early in the process, the less time it costs you at the end of the process...And it’s real hard to convince somebody to spend money up front...I mean it’s just we are, we are back to again, having the bumps and blips. Originally we had always said we wanted to be able to live in the valley and enjoy the peaks. And with the economy and everything shifted you know, we ended up having to live on the peaks and suffer through the valleys. And we’re shifting the line back now. I mean we’re still running with a lean staff. But we’re running with a good staff [owner plus one doing everything] that matches the needs of our customers.”</p>
Jasmine (1)	<p>“You might not be playing the game well but you're still in the game. And so while you're in the game, you're still learning how the game is played. [If] you just give up and quit, you're not.”</p>	<p>“I haven't been asking for enough money [when talking with investors].”</p>

Entrepreneurial Resilience: Medium.

I rated the next set of organizations as “medium” for overall resilience. They are holding things together and trying to make progress toward one or more aspirations but have yet to find traction with new products or ideas. This group is comprised of all survivor firms – there are no startups in this group – but they display a range of perspectives, as shown in Table 20. Redbud and Holly are putting their own savings back into the organizations to keep them afloat in the belief that things will eventually improve.

Redbud, in particular, has a unique set of circumstances with the competition. The entrepreneur has done what he can to protect his intellectual property but still, the major competing manufacturers are infringing and selling the fabric cheaper to a “shared” customer. He offered, “They [the manufacturers] come in with an undercut price, and of course they [the customer] say ‘sure.’” He believes the US government has the power to “level the playing field” (incidentally, this is a shared sentiment among many of the firms in the sample), but he is not very hopeful that the government will actually pass legislation to do so. The founder endeavors to persevere and he recently achieved significant sales with one particular product success, which was subsequently ‘stolen’ and now he is back in the search for a new product idea.

The founder of Holly is also hopeful for the future but continues to struggle to find new ideas for products or services that will grow his revenue to support his environmental sustainability aspirations and as a result, is rated as medium resilience. He accepts that the organization is on a journey towards sustainability, and yet his tactics for gaining customers are abrupt and seemingly uncoordinated. He is working to generate a “proposal” for

increased involvement – “skin in the game” as he terms it – from his customers and meanwhile is trying a variety of other behaviors to generate interest. He hired a person “skilled in sales” to build customer relationships and said, “A majority of that position is education” because “people just don’t realize” how much difference little changes could make. Additionally, he said, “most people don't understand why they're paying more or even the value of it.” While his association with the environmentally sustainable community is authentic and long-standing, it may be evolving into an instrumental association to increase demand with his product offering.

The founder of Firethorn has yet to generate results toward growing demand for his “Made in the USA” products even as his own aspiration for this is increasing. He is also attempting to educate the customers about what he sees as not only the destruction of the middle class of the US but the disservice to the people of developing economies as manufacturing moves from country to country. He passionately expresses these beliefs and is trying a variety of behaviors to generate this “anger” he believes will not only support, but build the community of “Made in the USA.” His authentic community participation is not as deep-rooted or long-standing as Holly’s but his instrumental education tactics are similar. He appears to be searching for a combination of activities that will support his aspirations to persevere, but at the moment has only achieved medium resilience.

Table 20: Resilience Rating Quotes - Medium

Resilience Rating Quotes: Medium		
	0 - Ready to Give up 1 - Endeavor to Persevere	0 – Not Trying Beyond Survival 1 – Trying with No Results 2 – Achieved Progress Towards Goal
Redbud (2)	“There have been very difficult times. Don't mind telling you that. I'm hard headed, stubborn...egotistical, whatever. It's not in me to give up. It's just not there. But, I'd be lying if I didn't say I thought about it [closing]. Because the last three years have been tough.”	“I've funneled a lot of my own money back into the company to keep it alive. Money that the company made because, you know, the company has done well. It has not done well, the last three years. And because of that, I've had to fund it. We had a nice upswing, but it [the intellectual property] was stolen and knocked-off.”
Firethorn (2)	“If America is weak, we're not going to save the world...The manufacturing is the middle class...America is very angry. The people - the middle class - are very angry right now. What can we do is create jobs because remember for every job you create, you're going to affect four people, and that's important to me... You're not going to see manufacturing coming back. I'm going to do what little I can. I want to grow as much as I can. I'm going to wave the flag.”	“They're satisfied with what I'm paying them and satisfaction is not what I'm looking for. To develop a company you need people that are very unsatisfied, very angry. Now I've got to find people unsatisfied to go to work for me...”
Holly (2)	“We still had the overhead. We had the building, we had the equipment. We did then what's similar to what we're doing now. My business partner and I went 18 months without pay. We maxed out our credit lines, the banks cut us off... If we stay in the south that will be plenty for us... We lost sales because our customers went out of business, they ordered less or they didn't order at all; we did not lose customers because they went to a cheaper product. If 2009 wasn't price pressure, then I'll never know what price pressure was. So it held up during that. So that gives me hope for the future.”	“Actually what will happen is sometimes you're doing things long before you have a name for them... we're on a journey.... What I told him, I says, you're fooling yourself. You pull this [brand] name away from this stuff and you're in the gutter with everybody else. But what's getting you there is your name. Eventually somebody's gonna make this connection (pointing with his two index fingers together). That's what I always say. I've had conversations with [others promoting the community beliefs]. Those guys get it, man I'm all about this stuff. When I get down to their purchasing guy, he says I gotta buy as many [products] as cheap as I can. So I said, eventually, it's gonna catch up with you... Up till now I've been testing out the idea; now I need to really lay it out there so I can then go to the next people and then make a proposal.”

Entrepreneurial Resilience: High.

Table 21 summarizes the five organizations with “high” overall resilience: three startups and two survivors. In each case, the firms have been able to increase at least one aspiration and also to gain some positive traction toward achieving its aspirations. Most expressed surprise at even considering giving up; they are actively seeking to achieve their goals and they are making observable progress toward those goals. The entrepreneurs of these organizations are on a mission to survive, achieve their aspirations and altogether, their behaviors are enabling high resilience.

Both survivor firms with high overall resilience are preparing to pass the organizations on to the next generation at some point in the future. Magnolia is transitioning and plans to completely cut ties with the operations and Nandina still plans to participate from retirement. Nandina’s identity is reflected in his reasons to endeavor to persevere: he said he “never said we should shut down”, although they laid off over half of their staff to keep the business afloat. As described earlier, the difference here is that Nandina’s identity-based aspiration is to be the “go-to” entrepreneur and he has greater leeway in his selection of behaviors toward employees, whereas Magnolia’s identity-based aspiration is to support and provide for the people. This is reflected in his reasons for endeavoring to persevere as well. Although he is planning to pass a healthy business, he is fully committed to his employees. His focus is on the strengths of the organization and his behaviors for remaining competitive have consistently enabled his survival.

Juniper, Dogwood and Camellia are the startups with high resilience. Juniper and Camellia both support a community with a “cause” and want to make sure people are put

back to work in the US manufacturing textile industry. Dogwood, on the other hand, is an anomaly in this “high resilience” rating: the founder is not tied to the organization through any values-laden aspiration or commitment. He is instrumentally driven to grow the organization. One aspect that is unique, and may contribute significantly to their positioning, is the fact that the founder learned from past experience the value of making use of an extensive set of resourceful behaviors. Additionally, all three organizations are successfully generating demand and creating opportunities in niche markets – Camellia and Dogwood are actually creating the markets as well – amid the destruction of the industry.

Table 21: Resilience Rating Quotes - High

Resilience Rating Quotes: High		
	0 - Ready to Give up 1 - Endeavor to Persevere	0 – Not Trying Beyond Survival 1 – Trying with No Results 2 – Achieved Progress Towards Goal
Dogwood (1)	“If you're launching a business that's kind of a farming enterprise to build [a name], to create excitement around that, to create something that has a lot of potential that has clearly been-- you know, harnessed-- But also still a lot of potential that's still available. To date, I've always sort of considered that it's best to leave the party while you're still having fun. Sometimes, I stay just a little too long.”	“We're farming rather than hunting; our risk as any one time is very low as in the payback, but we do a lot of it.”
Nandina (2)	“We never said we would shut down. We cut things back or cut hours back, but never considered shutting down. And we never have considered bankruptcy either... I've sold two companies already and if my [family] wasn't in it, this one had done been sold too...[They] will take over but I'll still stay in it one or two days a week.”	“I'm actually turning down business – turning it down. And not just every now and then, but several times a week. People just know I can do anything.”
Juniper (1)	“Everybody had to back up and punt... There's plenty of demand out there, I'd love to be able to see people get jobs.”	“We have an opportunity to grow, but I operate out of the cash in my pocket. We're controlling our growth.”
Magnolia (2)	“For better or worse I'm really committed to these people... We've tried to avoid wasting money, we've tried to avoid doing stupid things, and we've tried to avoid making fatal mistakes. And, we've hired people that we've needed and we've told them when we've hired them that we're going to work terribly hard together and my wife and I live in this town and we work every day and I work more hours than anybody and I, our employees feel like they know the ownership... We are still a viable domestic manufacturing company.”	“We peaked three years ago and we've been flat since, flat and down a little bit... We're fighting the good fight trying to, trying to take what advantages we do have, closest to our customers, quick turns, sensitivity to the markets, new styling, having, real good communications with our customers, having our customers come and visit us, all, the advantages that we have, but the other folks have lots of advantages that we don't have. Less expenses, better finance, all sorts of things they have, that, so, we have to, we have to minimize our disadvantages and maximize our advantages and we, and we're trying to make do, a company.”
Camellia (1)	“We're giving people actual jobs, we're helping them get jobs so they can have, their family's can have a quality life and you know it's here [in the US]... It's a cause-driven company.”	“It's one thing to have a good idea but it's another thing to do it right and deliver it and get it on time and all those things that matter more than the idea almost. But if you get it done right, people are going to come back and they have.”

Answering the Research Questions

Descriptions of the element of the theory of entrepreneurial resilience and resourcefulness – forms of commitment, aspirations and adaptation and behaviors of resourcefulness – combine to answer the research questions of how entrepreneurs hold their organizations together through tough times and how they can then rebound while under significant resource constraints. The variations in these elements combine as precursors to the outcome of varying levels of resilience. Some entrepreneurs managed to create opportunities amidst adversity imposed from low environmental munificence and in the form of negative slack at the firm level and their organizations are doing well; others are not faring as well.

I found that aspirations may adapt in two ways: changes in the focal aspiration and changes in the level of the aspirations. To begin, a form of commitment significantly shapes the complexity of the aspirations: values-consonant commitments complement purely economic commitments and thus enable the multi-faceted aspirations. Single-faceted aspirations only permit increases or decreases in an aspiration where as multi-faceted aspirations permit a change in focus. The change in focus allows an entrepreneur to deemphasize one aspiration that may suffer from an environmental shock or negative slack circumstance; as a situation improves, the focus may or may not switch again between the aspirations. In either case, having more than one aspiration presents an opportunity to explore an alternate aspiration in a change in focus as another decreases due to changes in the business environment. This is a mechanism by which the entrepreneur can still endeavor to persevere – to fulfill more than one aspiration.

My primary findings regarding behaviors of resourcefulness are also twofold. The forms of commitment shape the choice of behaviors as well as the boundary conditions by which the behaviors are implemented. Purely economic commitments and aspirations are the least restrictive and allow the entrepreneur freedom to experiment with any behavior and as well as the liberty to push the boundaries of each behavior. On the contrary, the identity-based form of commitment dictates that behaviors and boundaries must coalesce with the identity of the venture and the entrepreneur. The ideology-based form of commitment falls between the other two on how it affects the choices of behavior open to the entrepreneur: it places the choices and boundaries of behavior under only moderate restrictions.

In summary, I identified two distinctly different routes to resilience: one is more rigid and focused on “staying the course” and the second is more flexible and open to trying out new values, new aspirations and a wide range of behaviors. The first is driven by commitments based on a founder’s sense of identity and the second is shaped largely by whether or not the founder is driven by ideological commitments beyond sustaining a profit. In this process of theory development, I discovered – and have illustrated here – varied paths to achieving entrepreneurial resilience and describe the contributions to scholarly literature in Chapter 5.

CHAPTER 5: CONTRIBUTIONS AND FUTURE RESEARCH

Throughout the course of this study, I discovered variations and patterns of behaviors among entrepreneurs and organizations under resource constraints – negative slack – to generate the theory of resourcefulness and resilience presented in this dissertation. This provides the basis for a number of theoretical contributions, including the conceptualization of the notion of negative slack, which complements and extends traditional behavioral theories of the firm and the strong body of research on positive organizational slack. I describe three additional contributions to the scholarly literature here. First, the theory of entrepreneurial resourcefulness and resilience opens frontiers for research regarding responses to shocks from the environment, surviving resource constraints and rebounding under adverse conditions, which remains relatively unaddressed in the entrepreneurship literature. Second, the complexity and adaptation of aspirations extends and challenges prior organization literature about behaviors regarding “shifting focus” and “threat rigidity” and complements behaviors of prospect theory. Third, this research begins to incorporate entrepreneurial agency and identify the importance of commitment, identity, ideology and moral ways of being in the world and complements the growing recognition that supra-rational elements of entrepreneurial behaviors such as passion (Cardon, Wincent, Singh, & Drnovsek, 2009) are important to entrepreneurship as well as the integration of for-profit and non-profit goals of firms in emerging literature in social entrepreneurship.

Resourcefulness & Resilience

In this study I build theory that contributes directly to entrepreneurial resilience in several ways. First, much work has been generated in the psychology and individual level literature about personal resilience (Luthar et al., 2000); however, very little research has addressed resilience at the organization level (Vogus & Sutcliffe, 2007) and neither has a body of research evolved around entrepreneurial resilience. Responses to surprises or traumatic events have received much more attention (e.g., Quinn & Worline, 2009; Weick, 1993). Rather than solely dealing with such events in hindsight, much-needed disaster preparedness and calls for organizations to plan ahead for dealing with such events or avoiding them altogether has come to the forefront in emerging literature on resilience engineering, particularly related to safety (e.g., Woods, 2006). Yet, for the most part, these solutions and general considerations of resilience require excess resources (Vogus & Sutcliffe, 2007). This study finds that variations in commitment, complexity of aspirations and behaviors of resourcefulness combine to create resilience under such conditions of low environmental munificence and negative slack – without the benefits of excess resources. Further, events such as the shocks in my study trigger pervasive environmental conditions. Not only did changes in trade regulations create challenges that had never been experienced in the southeastern US, the changes also drastically altered the dynamics of the competitive environment for any foreseeable future. Future research will continue to investigate the persistence of these firms to contribute to our understanding of how entrepreneurial firms demonstrate resourcefulness and resilience over time.

Importantly, this theory brings together various pieces of the literature on resourcefulness and illustrates ways that these behaviors are an important precursor to resilience. Over the last two decades, research in entrepreneurship has occasionally highlighted the importance of resourcefulness, defined as patterned variations in making use of limited resources. For example, work on bootstrapping (Bhide, 1992) highlights the key role of careful financial management and the conservation of cash. Some work in strategy and improvisation has identified niche and other generic market strategies sometimes appropriate to small, young resource-constrained firms and identified both advantages and problems related to seat-of-the-pants opportunism by resource-constrained ventures (Baker, Miner, & Easley, 2003; Lee, Lim, & Tan, 1999). Research on bricolage shows – reinforcing classic insights from Penrose (1959) – that variations in what entrepreneurs define as resources and what they do with them may sometimes matter more to survival and success than do initial variations in resource endowments (Garud & Karnoe, 2003). Taken together, this work leads to the expectation of “substantial differences among firms in their ability to survive or prosper given ostensibly similar resource constraints” (Baker & Nelson, 2005: 332). By studying the behaviors of resourcefulness, creating the thrift category to capture behaviors similar to bootstrapping, and discovering the use of a community as a behavior of resourcefulness, this theory contributes to the growing body of literature about resourcefulness and illustrates how behaviors – shaped by forms of commitment – and their boundaries may be tested in efforts to achieve positive adaptation.

Aspiration Complexity & Adaptation, Threat Rigidity

Behavioral theories of the firm intricately link aspirations and behaviors. As such, aspirations are formulated based on historical and social factors – of the firm and the competitive environment – and the levels of aspirations adjust according to performance (Cyert & March, 1963; March & Simon, 1958). Similarly, the rate at which aspirations adapt to performance is influenced by levels of organizational slack, and particularly aspiration decline is buffered by slack levels (Cyert & March, 1963; March & Simon, 1958). In my study, however, I find little support that the aspirations in my sample adapted to historical performance – or social factors of the competitive environment – for two reasons. First, the survivor cases in my sample with historical performance by which to compare changes caused by the shocks had experienced relatively significant growth over the years. Though the economic aspirations somewhat declined in a few cases as the environment became less munificent and resources within the firm were depleted, the entrepreneurs were able to maintain their survival by switching their focus to another, values-laden, aspiration. The mechanism by which the aspirations did not drastically decline or the entrepreneurs give up, was through aspiration complexity. The economic aspirations did not necessarily decline, but were deemphasized through this process, and presumably until conditions could become more favorable. The multi-faceted and value-laden commitments to the firm undergird complex aspirations that enabled resilience – and thus the aspirations did not adapt to declines in performance that were beginning to comprise the histories of the firms.

Second, the aspirations were also not adapting to the social environment. In this environment, a majority of firms have already disbanded and the media constantly publishes

accounts of textile decline. Had the firms adapted to the aspirations of their competition, they too would have shuttered the buildings and given up. However, I discovered an important precursor for the adaptation of aspirations: the entrepreneur's form of commitment not only enables multiple aspirations, but the levels of those aspirations may increase when faced with adversity. Several of the cases in this study increased their commitment to survival as the environment became increasingly dismal. Others did not even acknowledge the constraints and saw no option but to persevere – and to find ways to positively adapt despite any adversity. My results here complement emerging research that has investigated firm actions in light of multiple aspirations (Greve, 2008; Plambeck & Weber, 2009) and earlier notions of a “shifting focus” of aspirations related to risk preferences (March, 1988; March & Shapira, 1987; March & Shapira, 1992). In addition, prior behavioral theories address how organizational slack may be used to resolve the multiple aspirations of actors within the firm (Cyert & March, 1963), however the firms in my sample could not, in effect, distribute negative slack for such a purpose.

My study captures behaviors of the entrepreneurs and organizations under declining environmental munificence and conditions of negative slack. Rather than finding a restriction in information flow or an increase in control over processes of the firm as responses to threatening situations that could hinder positive adaptation as outlined in the “threat rigidity” literature (Audia & Greve, 2006; Staw, Sutherlands & Dutton, 1981), I find an increase in behaviors of resourcefulness during threatening times and transparency of information processing both within the firm and with the environment. For example, in cases of the instrumental community association behaviors, the entrepreneurs often tried to “educate”

potential customers about the violations of the community principles, but in return, offered complete transparency with information flowing through their organizations and how they could help to right the observed violations. Importantly, I find that the form of commitment shapes the behaviors, which may in turn shape the types of information processing and control tendencies during adversity. Where control was increased, control was already an integral behavior of the entrepreneur within the organization (tied to the values of the entrepreneur). I did not find cases of a change of behaviors that was inconsistent with the form of commitment. Where I found inconsistencies with threat rigidity, I found consistencies with prospect theory (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981) as the entrepreneurs in this study escalated their commitments (Shepherd, Wiklund, & Haynie, 2009) as adverse conditions increased. They framed their choices and evaluated the options (Kahneman & Tversky, 1981) and some cases “had no choice” but to persevere and others became more determined than ever, but still based on values-laden commitments.

Emotional Elements, Social Entrepreneurship

That finding – of the importance of values-laden commitments in shaping aspirations and behaviors – brings me to the final contribution to the entrepreneurship literature. I discovered the important role played by founder commitments, values, identity and ideology in shaping aspirations, behaviors and resilience. While little support has been found for individual personality differences as a phenomenon of entrepreneurship (Gartner, 1988; Low & MacMillan, 1988; Sandberg & Hofer, 1987) with the exception of overconfidence (Camerer & Lovallo, 1999; Hayward, Shepherd, & Griffin, 2006), I find support for the

emergence of supra-rational elements of entrepreneurial behaviors such as passion (Cardon et al., 2009).

Cardon and colleagues (2009) delineate three stages of entrepreneurial venture development that characterize the identity-roles adopted by entrepreneurs. I suggest a complementary fourth role, if not a set of roles, that I have discovered through this research. I find support for passion for startup and identity-roles; some of the entrepreneurs in this study expressed passion for *starting* ventures. However, all of the entrepreneurs in the study with value-laden commitments and aspirations also expressed passion toward an outcome; an outcome such as maintaining a healthy firm to support and care for employees, an outcome such as bringing environmentally conscious products to the competitive market, or an outcome such as revitalizing the US textile manufacturing industry. These outcomes represent a different identity-role – one that is, in fact, tied to the values of the entrepreneur and categorized in this theory as their form of commitment. They are committed to an aspiration that describes an outcome they want to see to fruition. Their behaviors enable the realization of these aspirations and they diligently seek to find ways to achieve them. Many times, the passion for this outcome is the driving force behind the startup of the venture, as in the case of every firm in this study, save the entrepreneurs with purely economically driven commitments.

Descriptions of this discovery also contribute to the growing body of literature around social entrepreneurship (e.g., Grimes, 2010) and firms with values-driven missions, combining conventionally detached for-profit and non-profit dynamics. In addition, work in positive psychology (e.g., Fredrickson, 2001) describing achieving “more with less” through

benefits of positive emotions, work around the role of emotion in the entrepreneurial process (e.g., Foo, 2011; Foo, Uy & Baron, 2009; Hmieleski & Baron, 2009) and emerging literature on authentic leadership (e.g., Hmieleski, Cole, & Baron, 2010; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008) are likely to be important for consideration for future theory development and particularly to develop the findings of the level of authenticity with which the entrepreneurs associated with varying communities. Altogether, the discoveries of this dissertation formulated into the theory of organizational resourcefulness and resilience represent a significant step toward understanding entrepreneurship within penurious environments and for opening the frontiers of research into the importance of identity, ideology and values under resource constraints and adversity.

Future Research

The theory that I inductively generated in this dissertation has several distinct projects that will both enhance and test the theory. The next phase includes two simultaneous projects:

1. develop a complementary set – to the survivors and startups, explained below – of case studies of firms that have disbanded and
2. create and implement two formal surveys: one testing theory of entrepreneurial resilience (outcome of the dissertation), another testing theory developed from new case studies of disbanded firms.

Case Study Development.

Table 22 summarizes the steps for developing cases studies and synthesizes fundamental and complementary methodologies (column one – “Process Stage: Activity” – combines Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Strauss & Corbin, 1998; Yin, 2009) for building theory from case studies. This is the process I followed for my dissertation case studies and will use this to build the complementary cases.

Table 22: Future Work - Case Study Development

Methodology: Activity	Activities
Initial Theory: Definition of the Research Question/a priori constructs	Completed dissertation work identifies this as a complementary component to the emerging theory; “decline” literature review
Case Selection: Specified population/Theoretical sampling	Initial sampling and criteria: six to eight cases; access to founding entrepreneur(s); closed firms; reasonable driving proximity to NCSU, access to former employees (as appropriate)
Research Protocol: Gain Access/ Interview Schedule; Data collection method(s); Investigators; Levels of data; Multiple sources of data	IRB Approval: semi-structured interview schedule; primary interviews and direct observation; audio recorded; interviews with former employees, partners, suppliers, customers, other stakeholders (as appropriate)
Data Collection/ Entering the Field: Overlap data collection and analysis	increasingly focused questions with iterations between cases (inductive, grounded theory principles)
Data Analysis: Cross-case analysis/ Data coding, memos	nVivo software used for memos, coding, case study database and records of the study
Theory Development: Discoveries based on data analysis; Integration of concepts; Propositions	Integration with the existing theory developed in the dissertation; inductively generate modeling of causal relationships and patterns
Theory Presentation: Emic and Etic balance	Integration of quotes and analysis; high-level pattern recognition; address generalizability beyond cases
Enfolding Literature: Comparison with conflicting/similar literature	As briefly demonstrated in the “relevance” section here, this is a significant contribution to entrepreneurship research; unfold new contributions as they emerge
Reaching closure: Theoretical saturation when possible	Potential to continue interviews and case study development; saturation point – to be determined

Survey Methodology.

The target of the cross-sectional, large scale survey will be a sample of textile firms across the United States. Organizations of interest in this study will most likely have internet access and the entrepreneurs are most likely to respond by a self-administered web survey (Currivan, 2009). Advantages of web surveys include decreased item nonresponse because of programming options, increased opportunities for elaborate text responses, and rapid structuring of the data for analysis. However, the tradeoff with the web mode is the up-front investment of time for programming the survey (Currivan, 2009).

This stage of the research will test elements of the theory developed from cross-case study analysis to be able to generalize beyond the cases and predict behaviors of firms outside the case sample. I plan to develop two separate surveys: one for the dissertation-generated theory of resilience and one to test the theory developed from the new case studies in Project One.

Table 23 summarizes the steps for developing interview schedules and synthesizes fundamental and complementary methodologies (column one – “Process Stage: Activity” – combines Currivan, 2009; DeVillis, 1991; Edwards, 2010; Nunnally, 1978; Pedhazur & Schmelkin, 1991) for deductive testing.

Table 23: Future Work - Survey Development & Implementation

Methodology: Activity	Activities
Instrument Design: construct definitions and variable relationships; review existing measures; generate item pool; determine response format	Integrate existing measure of some of the behaviors; definition and relationship development among variables to test causal paths
Prepare the Instrument: expert review of item pool; combine into complete instrument (ordering and placement)	Experts in COT and selected industry members to comprise the board of experts; Account for item nonresponse errors in survey development
Test the Instrument: administer to development sample; refine accordingly	Administer the survey to the dissertation sample (eleven firms) plus selected disbanded firms
Survey Methodology: sample selection	Textile firm listings and databases; Non-probability sampling method, extending into purposive sampling; sample is likely to be limited to the textile firms that can be identified
Survey Implementation: administer the instrument	Administer online survey; Minimize nonresponse errors with follow up

Behavioral Measures

Another condition by which the behavior could have negative outcomes is by using the same behavior too frequently – or not enough. The data do not indicate patterns across all cases, however a few instances shed light on these instances. This will be investigated in the survey test of the theory.

Investigate Multiple Industries

Many industries in the US and around the world have experienced or are currently experiencing grades of the gale of creative destruction. This theory may be enhanced by extending it to other industries characterized by a low munificent environment, negative slack at the firm level and variations in performance: survivors, startups and disbanded firms.

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APPENDICES

APPENDIX A: ORGANIZATIONAL SLACK MEASURES

Author	Measures of Slack		
Bourgeois & Singh (1983)	absorbed slack	unabsorbed slack	potential slack
Chakravarthy (1986)			ability to raise long-term resources = market-to-book ratio, debt-to-equity ratio
Singh (1986)	absorbed slack = (SG&A/S); (Working capital/Sales)	unabsorbed slack = Quick Ratio (Cash + marketable securities)/ current liabilities	
Hambrick & D'Aveni (1988)		unabsorbed slack = equity-to-debt ratio; unabsorbed slack = working capital to sales	
Bateman & Zeithaml (1989)	preception of low slack	preception of high slack	
Finkelstein & Hambrick (1990)		immediate slack = working capital:sales	
Bromiley (1991)	recoverable slack = SG&A/Sales	available slack = current ratio (current assets/ current liabilities)	potential slack = debt-to-equity ratio (<i>lack of slack</i>); interest coverage ratio (income before taxes & interest to interest charges)
Lenway & Rehbein (1991)			ability to raise long-term resources = debt-to-equity ratio
Smith et al. (1991)	absorbed slack = (SG&A/S)	unabsorbed slack = Quick Ratio	
Miller & Leiblein (1996)	recoverable slack = accounts receivable/sales; inventory/sales; SG&A/sales		
Wiseman & Bromiley (1996)	recoverable slack = SG&A/Sales	available slack = current ratio (current assets/ current liabilities)	potential slack = debt-to-equity ratio (<i>lack of slack</i>); interest coverage ratio (income before taxes & interest to interest charges)
Cheng & Kesner (1997)	recoverable slack = SG&A/Sales	available slack = current ratio (current assets/ current liabilities)	potential slack = equity-to-debt ratio
Wiseman & Catanach (1997)	absorbed (recoverable) slack = SG&A/S		
Riahi-Belkaoui (1998)	absorbed slack = G&A/ COGS	unabsorbed slack = (cash + marketable securities) - (current liabilities/sales)	
Deephouse & Wiseman (1999)	Recoverable slack = SG&A/Sales	Available slack = current ratio [current assets/ current liabilities]	Potential slack = debt-to-equity ratio
Palmer & Wiseman (1999)	recoverable slack = G&S/Sales	available slack = quick ratio	potential slack = debt-to-equity
Ferrier (2001)		unabsorbed slack = quick ratio (current assets - inventory/ current liabilities)	
Geiger & Cashen (2002)	recoverable slack = SG&A/sales	available slack = quick ratio	potential slack = debt-to-equity ratio
Greve (2003)	absorbed slack = SG&A/sales	unabsorbed slack = quick assets ratio (cash + marketable securities)/ liabilities	potential slack = debt-to-equity ratio
Daniel et al. (2004)	recoverable slack (overhead expenditures)	available slack (excess liquidity)	potential slack (borrowing capacity)
George (2005)		high discretion slack = cash reserves	low discretion slack = debt-to-equity ratio
Love & Nohria (2005)	absorbed slack = SG&A/Sales alternatives	Absolute Absorbed Slack = [natural log] SG&A/ Sales	Relative Absorbed Slack = [natural log] SG&A/ Sales minus the mean industry SG&A level (Sales-weighted)
Iyer & Miller (2008)	absorbed slack = SG&A/Sales	unabsorbed slack = current ratio (current assets divided by current liabilities)	potential slack = debt-to-equity ratio (as an inverse indicator)
Ju & Zhao (2009)	absorbed slack = SG&A/Sales	unabsorbed slack = quick ratio (firm's cash flow + marketable securities/ current	
Latham & Braun (2009)		available financial slack = current ratio (current assets divided by current liabilities)	
Su, Xie & Li (2009)		unabsorbed slack = (current asset-current liabilities)/ assets and debt/ assets	
Wan & Yiu (2009)		unabsorbed slack = equity-to-debt ratio and (cash flow/ sales)	
Chiu & Liaw (2009)	recoverable slack = SG&A/sales	available slack = current ratio (current assets/ current liabilities)	potential slack = equity-to-debt ratio

APPENDIX B: INFORMED CONSENT FORM FOR RESEARCH - ENTREPRENEURS

Title: Textile Entrepreneurship

Investigators: _____

What are some general things you should know about research studies?

You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?

The purpose of this study is to understand challenges that entrepreneurs face in day-to-day activities and how resources are utilized to address those challenges. Phase I will gather data about this behavior through interviews and observations. Based on the data collected from Phase I, a separate survey will be administered to a larger sample to test theories developed from Phase I.

What will happen if you take part in the study?

If you agree to participate in this study, you will be asked to volunteer information about your activities with your textile entrepreneurial venture. We will ask questions about your company, job responsibilities, recruitment, retention, and organization of employees, challenges, and resources used to address those challenges in timeframes ranging from the start-up of the business through your current state and future plans. The initial interview will last approximately 90 minutes and will take place at your company's facility. Additional interviews and observation times will be requested for up to 12 months following the initial interview. These times are negotiable and will be set for your convenience and according to your availability and company operations. We will observe your day-to-day challenges and the resources utilized to address those challenges. We will record data through hand-written and typed field notes, and occasionally may request to audio record our conversations.

Risks

There are minimal risks to you if you choose to participate in this study. We want to accurately observe your activities, and will do our best to avoid disruption of your work environment. Your identity and corresponding data will not be recognizable in any public arena, including your workplace. Interviewing (conversational) and observational data will be held confidential between yourself and the researcher.

Benefits

There is no direct benefit to you for participating. Data related to you will be destroyed if you choose to withdraw from the study.

Confidentiality

The information in the study records will be kept strictly confidential. Data will be stored securely in a *qualitative research field strategic software tool, ATLAS.ti*. No reference will be made in oral or written reports linking your name or company to the study. You will NOT be asked to write your name on any study materials

so that no one can match your identity to the answers that you provide. Your data will not be shared with your employees. If data is compromised, the records will not contain your name, the name of your company, or your employees. It will contain only coded titles, through which only the researchers may connect your identity. Your employees will not be able to link your name with your data.

Compensation

There is no compensation for participating in this study.

What if you are an employee?

As an employee of this company, you do not have to participate as a requirement for your job.

What if you have questions about this study?

If you have questions at any time about the study or the procedures, you may contact the researcher at Campus Box 8301, Raleigh, NC 27695, or (919) 513.0389.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514).

Consent To Participate

“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”

Subject's signature _____ **Date** _____
Investigator's signature _____ **Date** _____

APPENDIX C: INFORMED CONSENT FOR RESEARCH - EMPLOYEES

Title: Textile Entrepreneurship

Investigators: _____

What are some general things you should know about research studies?

You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?

The purpose of this study is to understand day-to-day challenges in entrepreneurial firms and how resources are utilized to address those challenges. Phase I will gather data about this behavior through interviews and observations. Based on the data collected from Phase I, a separate survey will be administered to a larger sample to test theories developed from Phase I.

What will happen if you take part in the study?

You are invited to participate in this research about textile companies in North Carolina. We have given you our contact information and ask that you contact (*Researcher*) outside of your work environment with your decision about participating in the research. She may also follow-up with you within a week to see if you have any questions. There are two pieces to participating:

1. We will ask questions about your company, job responsibilities, day-to-day challenges, and the resources you use to address those challenges in timeframes ranging from the time you started working with this company up to now.
2. We will observe your day-to-day challenges and how you utilize resources to address those challenges. We may ask questions while you are working to be sure we are clear about your activities.

If you agree to participate, our first interview will last approximately 45 minutes. You may decide if you are more comfortable meeting at a convenient location outside of your work environment or in a conference room at your company's facility. We will plan to meet you at that location at an appointed time. Additional interviews and observation times will be requested for up to 12 months following the initial interview. Interview times and locations are negotiable and will be set for your convenience and according to your availability and work activities. We will record data through hand-written and typed field notes, and occasionally may request to audio record conversations.

Risks

There are minimal risks to you if you choose to participate in this study. We want to accurately observe your activities, and will do our best to avoid disruption of your work environment. Your identity and corresponding data will not be recognizable in any public arena, including your workplace. Interviewing and observational data will be held confidential between yourself and the researcher. Although your employer has already agreed to the study and therefore agrees with your potential commitment, your data will not be shared with your employer. Your employment is not at risk for your decision to participate in the study (*to participate or to not participate*) or for the information that you may share.

Benefits

There is no direct benefit to you for participating. Data related to you will be destroyed if you choose to withdraw from the study.

Confidentiality

The information in the study records will be kept strictly confidential. Data will be stored securely in a *qualitative research field strategic software tool, ATLAS.ti*. No reference will be made in oral or written reports linking your name or company to the study. You will NOT be asked to write your name on any study materials so that no one can match your identity to the answers that you provide. If data is compromised, the records will not contain your name and you will not be held liable for the data shared with the researchers. It will contain only coded titles, through which only the researchers may connect your identity. Your employer will not be able to link your name with your data.

Compensation

There is no compensation for participating in this study.

What if you are an employee?

As an employee of this company, you do not have to participate as a requirement for your job.

What if you have questions about this study?

If you have questions at any time about the study or the procedures, you may contact the researcher at Campus Box 8301, Raleigh, NC 27695, or (919) 513.0389.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514).

Consent To Participate

“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”

Subject's signature _____ Date _____
Investigator's signature _____ Date _____

APPENDIX D: RECRUITMENT CALL SCRIPT

Hi, My name is _____. May I please speak with [founder/entrepreneur]?

If no, is there a better time to reach him/her? [1st & 2nd calls, no messages; 3rd attempt, email “recruitment call message” & intent to call; 4th attempt, phone message; 5th & 6th attempts, no message; and move on (temporarily)]

If yes, hello _____, my name is _____. I am a PhD student at NC State in the College of Textiles. I received/found your contact information through _____. I would like to talk to you about my research and perhaps ask for your participation. Is this a good time?

If no, is there a better time when I can reach you?

If yes, great; thank you very much.

As a little bit of my background, when I finished my textile degrees, I moved into capacity planning with two different large apparel manufacturing companies. I decided to come back to school again about 3 years ago – but to study entrepreneurship rather than large corporations.

I am very interested in how you started your company and how you have gotten to where you are now. I am also interested in the sorts of challenges you face day-to-day and how you deal with them. I am structuring the research to study multiple companies and make comparisons across cases. I will be glad to share that at the end. Right now, I am starting initial interviews and recruiting companies for participation. I would like to come talk with you for an initial interview, maybe tour your facility, and talk with you about participating in our study, which will take place over the next year. I would really appreciate your participation. Is this something I can come talk to you about?

If yes, great. What days/times work best for you? [my open dates]

If no, do you have certain concerns about participating?

[probably time, money, privacy]

If yes, what can I explain for you?

[time – at your convenience; observations without disturbing work; money – there is no cost to you; privacy – your name or your employees names will not be linked with the data at all, I can supply additional details and an informed consent document from our research office.]

If no, Once again, I would really appreciate your help. This could be a great opportunity to promote textile entrepreneurship in the local community, connect with the resources at our College of Textiles and perhaps learn from others at the end of the analysis.

If still no, I understand; thank you for your time. If you have any more questions or thoughts later, feel free to send me an email. Have a great day.

APPENDIX E: EMPLOYEE INTRODUCTION SCRIPT

Entrepreneur: Hello, (*Employee*). This is (*Researcher*) from NC State. (*Researcher*), this is (*Employee*). He/She is responsible for _____. (*Employee*), we wanted to introduce you so that you know why they're here. They are doing research about textile entrepreneurship and are interested in talking with our company. I have already talked with them about their study and they are mainly interested in the challenges we face day-to-day and how we gather and use resources to solve those challenges.

I have agreed to talk with them from my perspective, including how we started the company and when we brought everybody on board. They are also interested in talking with you about your challenges, experiences and perspective. Your day-to-day challenges may be different from everyone else's and you may be the only person that knows how you solve them so well.

Please let me stress that you *do not have* to participate if you are not interested. It's completely voluntary. They can talk with you now, describe more about the research and give you their contact information.

Researchers: Thank you, (*Entrepreneur*). It's nice to meet you, (*Employee*).

(Entrepreneur walks away)

Researchers: As (*Entrepreneur*) said, we are conducting research about the challenges entrepreneurial textile firms face in day-to-day operations and how the people within the firms find and use resources to solve those challenges. We are talking with 7 other companies around North Carolina to also understand their challenges and resources. We will be coming back to talk with (*Entrepreneur*) several times over the next year and would like to understand your perspective.

We want to let you know that speaking with us is not a part of your job and you are not at all required to talk with us or participate in this study. Your employer understands that as well. However, we want you to know that your decision and all of our conversations will be held confidential between you and the researchers. Here is (*Researcher's*) contact information. Please read through these forms and give (*Researcher*) a call outside of work. May we also have your personal phone number to follow-up in about a week to see if you have any questions? We're following this same procedure for your co-workers so that everybody has the same information and opportunity.

(Give researcher's business card and IRB Informed Consent Form to the Employee. Receive the employee's personal contact information.)

Researchers: Thank you and we'll talk soon.

APPENDIX F: QUESTIONNAIRE GUIDE

Interview Date	
Interview Location	
Company Name/Interviewee	
Company Address	
Company Phone Number	
Company Location(s)	
Year Established	
Number of Employees	

About the Business – Founder Questions

1. Can you tell us about what led you to start your business?
2. At what point did you definitely decide to start?
3. What were some of your goals when you first started?
4. Have any of your goals changed since then? How and why?
5. What is unique about your company compared to your competition?

About the Technology – Founder Questions

6. What kinds of product development do you do?
7. Are there unique properties about the technology you use in your company?
8. How does technology impact the way you do business?
9. Does the equipment require specialized training for employees?

About the People – Founder Questions

10. When did you decide to bring other people on board? (any level)
11. What are your criteria for bringing in other people?
12. How do you find the people and skills you need?
13. How did you decide how to organize your staff? Do you ever find yourself moving people around the company?
14. What are some of their goals in working with your company?
15. From your perspective, have those changed over time?

About the Challenges - Founder and Employee Questions

16. What kinds of challenges do you face on a day-to-day basis?
17. Do you find yourself facing new challenges throughout your work? Are some challenges repeated?
18. Have you found any challenges more difficult to overcome than others? Why?
19. What has been your most difficult challenge so far?

About the Resources – Founder and Employee Questions

20. How do you decide where to begin looking for resources to solve challenges?
21. Do you purchase materials that you need or can you generally find what you need here?
22. Have you found that some resources work better than others? (or a combination? in certain situations?)
23. Do you often try different ways to solve challenges?
24. How often do you collaborate with co-workers to solve challenges?
25. Do you try combinations of resources until you find something that works? Is that solution easily recalled when facing a similar challenge?