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Strategies to Sustain a Real Estate Small Business in Postnatural-Disaster Area

Vianka Miranda
Walden University

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Vianka Maria Esteves Miranda

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Review Committee

Dr. Romuel Nafarrete, Committee Chairperson, Doctor of Business Administration
Faculty

Dr. Charles Needham, Committee Member, Doctor of Business Administration Faculty

Dr. Judith Blando, University Reviewer, Doctor of Business Administration Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2019

Abstract

Strategies to Sustain a Real Estate Small Business in Postnatural-Disaster Area

by

Vianka Maria Esteves Miranda

MBA, University of New Orleans, 2005

BA, Tulane University, 1996

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

March 2019

Abstract

Many small real estate business leaders lack effective strategies to resume and sustain operations in a postnatural-disaster environment. This multiple case study investigated strategies that 3 small real estate business leaders in southeastern Louisiana used to resume and sustain operations in the aftermath of a natural disaster. The chaos theory and stakeholder theory were the conceptual frameworks for this study. Data were collected from semistructured interviews, and reviews of business continuity plan documents and member checking. The themes that emerged from data analysis were leaders' strategies relating to business planning and innovation, stakeholder engagement, operations management, and disaster responsiveness. Implications of the findings of this study for social change include identification of effective strategies for increasing the sustainability of small businesses in the real estate industry through implementation of proven business continuity strategies that might help keep communities intact, reestablish commerce, and contribute to regional economic sustainability in the aftermath of a natural disaster.

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Dedication

This study is dedicated first and foremost to my heavenly Father, because through Him all things are possible, and I am grateful for His many blessing in my life. To my spouse, Modesto, and our children, Jessica, Jennifer, Joshua, Jacob, and Justin. You have all been patient, supportive, and understanding throughout this journey and my love and gratitude for our wonderful family is boundless. I also dedicate this study to my parents for your unwavering encouragement and confidence in me.

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Section 1: Foundation of the Study

Profit-generating small business enterprises are significant contributors to economic growth and development, yet 40% to 60% of small businesses in the United States that experience a natural disaster never reopen after that natural disaster (Federal Emergency Management Agency, 2018). Post-disaster sustainability planning enables small business owners to identify the fundamental recovery systems to expedite resumption of services in the event of a disaster (McKnight & Linnenluecke, 2016; Nepal, Atkinson-Travis, DeLaCruz, & Banerjee, 2018; Swanciger, 2016). The information generated by this study may help to increase the small business community's ability to efficiently and expeditiously re-establish commerce, particularly in the real estate industry, after large-scale natural disasters.

Background of the Problem

Hurricane Katrina, when combined with other 2005 hurricanes, constituted the largest natural disaster in U.S. history (Marshall, 2014). Between December 2005 and November 2007, the period following the largest natural disaster in U.S. history, the United States allocated more than \$13.4 billion in Community Development Block Grant (CDBG) funds to Louisiana alone for housing and long-term recovery programs. For perspective, the total value of grants equates to approximately 40% of the budget for the Department of Housing and Urban Development (HUD) for all states for the fiscal year 2005 (Marshall, 2014). Unexpected, large-scale, external shocks to small businesses, such as large-scale natural disasters, have affected most Americans and have not been adequately studied (Greenberg, 2014; Schrank, Marshall, Hall-Phillips, Wiatt, & Jones,

2013; Schumann, 2013). Large-scale disasters result in the displacement of a large portion of the residents in the affected region, and most local businesses cease operations (Chamlee-Wright & Storr, 2014; Marshall & Schrank, 2014; Schumann, 2013).

Most small businesses are home -based, and the obstacles to small business recovery affect the economic and personal well-being of the business owner and his or her family (Schrank et al., 2013). Therefore, small business disaster recovery is an ongoing process dependent on the small business owner, the owner's household, and the community recovery over time (Chamlee-Wright & Storr, 2014; Greenberg, 2014; Marshall & Schrank, 2014). Successful resourcing practices help community leaders, housing industry practitioners, and disaster recovery officials to understand, visualize, coordinate, and effectively manage post-disaster housing concerns (Chamlee-Wright & Storr, 2014; Greenberg, 2014; Marshall & Schrank, 2014).

Problem Statement

Estimated economic damages from the hurricanes of 2005 in the United States exceeded \$200 billion, of which \$20 billion is directly attributable to business property losses (United States Small Business Administration, 2017). Approximately 40% to 60% of small businesses that experience a natural disaster never reopen (Federal Emergency Management Agency, 2018). The general business problem that I addressed in this study is that small real estate companies are likely to go out of business after a natural disaster if they do not have an effective post-natural-disaster plan in place. The specific business problem that I addressed in this study is that leaders of small real estate businesses lack strategies to sustain activities after a natural disaster.

Purpose Statement

My purpose in this qualitative multiple case study was to explore strategies that leaders of small real estate businesses use to sustain their businesses after a natural disaster. The target population included small business leaders in the real estate industry in Louisiana who established and implemented business disaster sustainability plans. Resumption of business operations in the wake of any disruption event is critical to business sustainability (Torabi, Rezaei, & Sahebjamnia, 2014). The implications for positive social change include improved sustainability strategies for business leaders to facilitate community rebuilding and economic development in a postdisaster environment.

Nature of the Study

Three common research methods include qualitative, quantitative, and mixed methods research (Yin, 2018). I used the qualitative research method. Unlike quantitative and mixed method research methodologies, qualitative research includes open-ended research questions to facilitate information-rich responses (Cronin, 2014; Yin, 2018). The criteria for proper qualitative research are intended to be flexible (Lub, 2015). Qualitative analysis is a valuable tool to establish a clear understanding of themes and issues, and for extracting meaning and answering fundamental questions (Connelly, 2016; Cronin, 2014; Cypress, 2017; Yin, 2018). The goal of qualitative researchers is to design and incorporate methodological strategies to confirm reliability and validity of the findings and to evaluate the quality of research to facilitate practical use of the research findings (Cypress, 2017; Connelly, 2016; Noble & Smith, 2015).

I considered two research designs for the qualitative study of small business postdisaster sustainability planning: the phenomenological design and the case study design. Researchers use the phenomenological design to develop conclusions based on the meanings of participants' experiences with a phenomenon (Cypress, 2017; Hanson, Balmer, & Giardino, 2011; Lub, 2015; Yin, 2018). The case study method is the research methodology by which the researcher draws ideas based on applied experience as well as the observations and experiences of the community in which the researcher operates (Hanson et al., 2011; Yin, 2018). postdisaster sustainability planning strategies are used by small business leaders to re-establish operations after a disaster. I chose the case study research design to investigate real-life situations involving multiple participants in an organized and rigorous manner. The case study design made it possible to interview the small business leaders using open-ended questions and review company documents to understand and analyze their disaster sustainability plans.

Research Question

The research question that drove this study was: What are the strategies that small business real estate leaders use to sustain their businesses after a natural disaster?

Interview Questions

1. What type of disaster did you experience?
2. What postdisaster sustainability strategies did you use to sustain your business after the natural disaster occurred?
3. What sources of reference and methodologies did you use in developing the postdisaster sustainability plan?

4. What obstacles did you encounter in implementing the plan?
5. How did you address the critical obstacles to implementing a postdisaster sustainability plan?
6. How did your organization develop the postdisaster sustainability plan?
7. How did your business leaders respond to development of the postdisaster sustainability plan?
8. How, if at all, have you revised your postdisaster sustainability plan since the disaster?
9. What else can you share with me about the development and implementation of your organization's postdisaster sustainability plan?

Conceptual Framework

The conceptual frameworks for this research were chaos theory and stakeholder theory. Henri Poincare is the founder of chaos theory (Bussolari & Goodell, 2009). The fundamental principle of chaos theory is that systems tend to self-organize to adapt to continuing challenges to overcome chaos (Faggini & Parziale, 2016). The most useful aspect of the chaos theory for business leaders is that it increases an understanding of the unpredictability of a system's behavior (Bussolari & Goodell, 2009; Gu & Chen, 2014). The philosophy can reflect a type of crisis management theory as it aligns with the transitional shift between order and confusion and emphasizes stability and transformation. I analyzed responses to the nine interview questions listed to understand the extent to which business owners understand the unpredictability of the results of a disaster and have a plan for resuming business stability and sustainability.

Freeman originally developed the stakeholder theory in 1984 to investigate how firms engage stakeholders that affect the organizations as well as stakeholders that are affected by the organization's actions (Freeman, 2010; Hillman & Keim, 2001). Businesses engage with disaster-affected communities through their stakeholder relationships (McKnight & Linnenluecke, 2016). Under the stakeholder theory, governments, community organizations, owners, consumer advocates, suppliers, customers' competitors, employees, and others are all stakeholders in the business (Freeman, 2010). The stakeholder model prescribes action for organizational managers, how groups and individuals affect an organization and how management, in turn, responds (Freeman, 2010). The stakeholder theory facilitated an understanding of the strategic direction, the strategic program formulation, budgeting, control and structure, and systems necessary for strategic management. The stakeholder theory provided a lens for understanding the strategic benefit of postdisaster sustainability and business continuity planning for firms to recover in a postdisaster environment and made it possible to analyze responses to the interview questions to evaluate the degree to which business owners have incorporated the principles of stakeholder theories into their disaster recovery plans.

Operational Definitions

Business continuity planning. Business continuity planning involves the development and implementation of policies and procedures to mitigate the risks associated with business disruptions (Gordon, 2016).

Chaos theory. Chaos theorists purport that change is constant and unavoidable so, in developing communities, organizations must adapt to change (Ozturk & Kizilkaya, 2017).

Complexity theory. Complexity theorists argue that organizations interact with their environment to reorganize themselves (Maturana & Varela, 1980).

Disaster. A disaster is the extensive disruption and damage to a community that surpasses the ability to respond and overpowers or exhausts available resources (Mayner & Arbon, 2015).

Federal Emergency Management Agency (FEMA). The United States Government formed the Federal Emergency Management Agency in 1979 to organize response to catastrophes in the United States (FEMA, 2018).

Small business. The United States Small Business Administration defines a small business as manufacturing companies with 500 employees or fewer, and non-manufacturing businesses with average annual revenues of less than \$7.5 million; industry specific exceptions may apply (United States Small Business Administration, 2018).

Stakeholder theory. The stakeholder theory argues that firms that contract with their principal stakeholders, based on shared confidence and collaboration, maintain a competitive advantage over firms that do not, all other factors being equal (Freeman, 2010).

United States Small Business Administration (USSBA). The U.S. government created the United States Small Business Administration (through the Small Business Act

of 1958) to administer loans, loan guarantees, contracts, counseling sessions, and other forms of assistance to small businesses (United States Small Business Administration, 2018).

Assumptions and Limitations

Assumptions

Leedy and Ormrod (2013) defined an *assumption* as a perception of truth without corroboration. Researchers can enhance the validity of research through awareness of assumptions and limitations to maintain rigor in interpretations of research findings (Kirkwood & Price, 2013; Malone, Nicholl, & Tracey, 2014). My primary assumption was that small business owners would be honest and forthright in their answers to the interview questions. I also assumed that, as stakeholders, small business owners have a vested interest in increasing operational sustainability and welcome an improved understanding of the link between business continuity and disaster planning to increase the likelihood of their businesses surviving in the aftermath of a natural disaster. I assumed that, as stakeholders, small business owners have a vested interest in understanding the tools available to develop and implement disaster sustainability plans to increase the likelihood of sustainability in the wake of a natural disaster. I assumed that the participants would answer the interview questions with honesty and integrity.

Limitations

A limitation refers to a researcher's biases toward the outcome of a study that could affect the validity of the project (Venkatesh, Brown, & Sullivan, 2016). In this study, the small sample was one limitation, as well as the specific phenomenon analyzed,

as it was unique to a large geographical area (Venkatesh et al., 2016). The research findings might not apply to broader populations. Another possible limitation was the availability of qualified participants: small business owners who have a sustainability plan in place. Large companies regularly use sustainability planning, but business continuity planning is not as popular with small businesses (Swanciger, 2016).

Delimitations

Delimitations are features of a study that a researcher sets to establish the scope and limit of the research study to address the research question (Venkatesh et al., 2016). I limited the study to small businesses in the real estate industry in Louisiana. I further limited the scope to an area prone to natural disasters in Louisiana. I included small business leaders who have developed and implemented disaster sustainability plans.

Significance of the Study

Contribution to Business Practice

Increased awareness and understanding of practical business sustainability planning strategies have the potential to aid small businesses during the disaster recovery process. Small business disaster planning and recovery involve interrelated individual and organizational decisions encompassing a wide range of issues that may change over time or under different circumstances (Jordan & Javernick-Will, 2013). An essential component of disaster recovery is the identification of successful resourcing practices. These practices help community leaders, housing industry practitioners, and disaster recovery officials to understand, visualize, coordinate, and efficiently manage postdisaster entrepreneurial concerns in a rapidly evolving environment (Chang,

Wilkinson, Potangaroa, & Seville, 2012; Lam, Arenas, Pace, LeSage, & Campanella, 2012). The information from this research may be used by all business professionals who operate in a disaster-prone area to improve business continuity planning in response to unplanned business disruption. Business leaders who develop, maintain, and update disaster sustainability plans have an increased likelihood of small business survival (Benson, 2016).

Implications for Social Change

The findings of this research study may contribute to social change by identifying effective strategies for increasing the sustainability of small businesses in the real estate industry. Effective business continuity strategies may help keep communities intact, reestablish commerce, and contribute to regional economic sustainability (Schrank et al., 2013). Small business disaster recovery is an ongoing partnership involving the small business owner, the owner's family, customers, and the community (Marshall & Schrank, 2014). Small businesses are significant economic contributors, and postdisaster sustainability planning is essential to increase the small business owner's ability to reestablish operations and contribute to community redevelopment (Marshall & Schrank, 2014). Research regarding postdisaster recovery strategies is especially crucial for small businesses because it leads to increased preparedness and recovery strategies for the small business sector and reduced economic vulnerabilities in areas dominated by small business owners (Schrank et al., 2013). Successful recovery practices may help community leaders, housing industry professionals, and disaster recovery officials to

understand, visualize, coordinate, and effectively manage postdisaster concerns to increase community resilience (Chang et al., 2012; Lam et al., 2012).

A Review of the Professional and Academic Literature

Proper management of academic sources with appropriate notation for ease of reference and documentation is essential in academic research (Fusch & Fusch, 2015). A unique organizational tool used for this purpose is the literature review (Fusch & Fusch, 2015). Researchers use the literature review to avoid the unintentional replication of existing studies, augment professional development, and contribute to the existing literature (Henry & Foss, 2015).

The review of the academic literature increases an understanding of the topics related to this research by identifying and summarizing credible, peer-reviewed studies. The keywords and phrases that I used in the searches include *chaos theory, complexity theory, small business definition and meaning, entrepreneurial sustainability, entrepreneurial financing, entrepreneurial failure, small business success, challenges of small business development, small business development, business environment, disaster mitigation, disaster planning, small business recovery, real estate disaster impact, economic development planning, and small business resources*.

As noted in Table 1, I reviewed more than 136 peer-reviewed articles and professional publications, books on theory and practice in the business field, and government documents. The literature-gathering process included the use of peer-reviewed journal articles, books, and websites. I obtained the research sources by

searching ABI/INFORM Global database, Academic Search Complete, Business Source Complete, EBSCOhost, ERIC, ProQuest Database, Google Scholar, and Science Direct. The use of multiple sources verifies the credibility of the information contained in the doctoral study. Of the total of 136 references, 90% are peer-reviewed sources. Of the peer-reviewed articles, 90% were published between 2013 to 2018. Thirteen items were published before 2013. Seven sources comprised of citations from government websites and other sources, not peer-reviewed. I also used six academic books.

Table 1

Summary of Academic Sources Used

	Older than 5 years	2013	2014	2015	2016	2017	2018	Total
Books	3	1		1			1	6
Dissertations								
Peer-reviewed articles	13	30	21	21	25	11	2	123
Government documents	1					1	3	5
Other resources					1		1	2
Totals	17	31	21	22	26	12	7	136

Overview

The United States Small Business Administration has been the authority on defining what is or is not a small business (Anastasia, 2015). The U.S. government created the United States Small Business Administration via the Small Business Act in 1953 under the leadership of President Eisenhower (United States Small Business Administration, 2018). The United States Small Business Administration was created to support the growth of small businesses and to provide training, resources, education, and

funding to aspiring U.S. entrepreneurs (Dilger, 2018). In 1958, Congress enacted the Small Business Investment Act to provide economic stimulus, expand the support of small businesses, facilitate long-term business loans, and stimulate private equity investment to support the expansion, growth, and innovation by small companies (Dilger, 2018; United States Small Business Administration, 2018).

postdisaster recovery and sustainability planning assists small business owners and managers to minimize disaster-related losses and stress, decrease recovery time, and increase long-term sustainability (Han & McKelvey, 2016; Nepal et al., 2018; Marshall & Schrank, 2014; Nicoll & Owens, 2013; Phelps, 2014; Schumann, 2013). However, many small business leaders do not have disaster recovery plans implemented to sustain a small business after a natural disaster (Doern, 2016; Phelps, 2014; Marshall & Schrank, 2014).

Research

Case study research is a useful form of qualitative research to establish a common understanding for the reader by identifying themes, exploring issues, extracting meaning, and answering essential questions (Henry & Foss, 2015; Yin, 2018). The criteria for proper qualitative research are intended to be flexible (Lub, 2015; Yardley, 2017).

Researchers use the case study method to study real-life settings in an organized and rigorous manner using single or multiple case studies, quantitative evidence, and relying on various sources of evidence (Cronin, 2014; DeMassis & Kotlar, 2014; Sarma, 2015). I interviewed three managers of small businesses based in southern Louisiana, who have maintained sustainability after a natural disaster and have postdisaster sustainability plans

implemented. By using a multiple case study method, I interviewed small business managers and reviewed the small business postdisaster sustainability plans to identify consistencies.

The target audience for the research findings consisted of leaders of small real estate businesses in Louisiana. A significant benefit of qualitative research is that it allows the researcher to observe and postulate inferred effects (Noble & Smith, 2015; Yardley, 2017). Qualitative researchers endeavor to use methodological strategies to confirm reliability and validity of the results of the study and to facilitate practical use of the research findings (Cypress, 2017; Noble & Smith, 2015). Case study research methods are uniquely suited to develop information relevant for small business managers (DeMassis & Kotlar, 2014; Lub, 2015; Noble & Smith, 2015; Yardley, 2017).

Small businesses are the mainstay of the U.S. economy; therefore, more information regarding small business postdisaster planning is needed to help fill fundamental knowledge gaps for business owners, academics, and practitioners. This knowledge may increase the likelihood of survival and sustainability for small business owners that experience an exogenous shock such as a natural disaster. Resumption of business operations in the wake of any disruption event is critical to business sustainability (Benson, 2016; Torabi et al., 2014). I used the chaos theory to identify the transitional shift between order and chaos and the stakeholder theory to provide a perspective for understanding the strategic benefit of postdisaster sustainability and business continuity planning for firms to recover in a postdisaster environment (Bussolari & Goodell, 2009; Freeman, 2010; Hillman & Keim, 2001).

Theory

The principles of the chaos theory and the stakeholder theory regarding complex business systems facilitate an increased understanding of small business disaster recovery planning (Bussolari & Goodell, 2009; Gu & Chen, 2014). Poincare is considered the founder of the chaos theory (Bussolari & Goodell, 2009;). The most prevalent characteristic of the chaos theory is the unpredictability of a system's behavior (Bussolari & Goodell, 2009). The chaos theory is considered a type of crisis management theory (Gu & Chen, 2014). The terms *complexity* and *chaos* are often used interchangeably (Bussolari & Goodell, 2009; Gu & Chen, 2014). The fundamental principle of chaos and complexity theory is that systems tend to self-organize to eventually exhibit unique patterns of behavior to adapt to continuing challenges to overcome chaos (Bussolari & Goodell, 2009; Gu & Chen, 2014). The theories involve an understanding of how order develops from turmoil without predictability (Faggini & Parziale, 2016).

The chaos theory incorporates a form of crisis management theory as it aligns with the transitional shift between order and confusion and emphasizes stability and transformation. According to the principles of the chaos theory, dynamic systems are continually changing, and conversion is part of the evolution of the system in response to the evolving environment. Therefore, organizational systems must adapt to change to continue to exist (Ozturk & Kizilkaya, 2017). The most useful aspect of the chaos theory for business leaders is that it increases an understanding of the unpredictability of complex system behavior (Bussolari & Goodell, 2009; Gu & Chen, 2014; Ozturk & Kizilkaya, 2017).

Chaos theory identifies the transitional shift between order and chaos that is indicative of transition and emphasizes stability and transformation (Bussolari & Goodell, 2009). The chaos theory purports that everything is continuously changing, and change is unavoidable in a developing world, so organizations must adapt to change (Ozturk & Kizilkaya, 2017). Small business owners must adapt to the changing environment as participants in the complex system (Chinh, Bubeck, Dung, & Kreibich, 2016; Jordan & Javernick-Will, 2013; Marshall & Schrank, 2014; Ozturk & Kizilkaya, 2017). Complex adaptive systems have three features (Holland, 1995). Complex systems adapt to current circumstances by gathering necessary information, involve an interaction between components creating the system and the environment, which causes the complex behavior to occur, and the organization gains experience because of the events faced, which necessitates organizational redevelopment (Holland, 1995).

The chaos theory is used in qualitative research as a framework to facilitate business growth and adaptation in the face of challenging events (Bussolari & Goodell, 2009). The uncertainty of organizational systems in the aftermath of Hurricane Katrina is demonstrative of complex systems attempting to create order from the resultant chaos (Leleu, Moises, & Valdmanis, 2013). The uncertainty of organizational, political, social, and personal systems that affected small business sustainability in the aftermath of Hurricane Katrina is illustrative of systems attempting to create order from the resultant chaos.

A fundamental concept in chaos theory is that everything is continually changing, and transformation is unavoidable in an evolving environment, so organizations must

adapt to change (Ozturk & Kizilkaya, 2017). The concept of small business disaster recovery is complex and multifaceted, and effective small business sustainability planning strategies are instrumental in expediting continuity of operations in the wake of a natural disaster. I demonstrated that, in the confusion that exists in the wake of a natural disaster, small business managers must lead the organization to redevelop in response to the changing environment to promote small business sustainability (Holland, 1995; Phelps, 2014; Piotrowski, 2006). Proactive preparation for events with a minimal likelihood of occurrence but a maximum exposure to risk and cost has continued to be a challenge for administration officials (Piotrowski, 2006). Small business disaster recovery is an ongoing process dependent on the small business owner, the family, the household, and the community recovery over time which involves interrelated people and organizations with a wide range of factors that may change over time or under different circumstances (Jordan & Javernick-Will, 2013; Leleu, et al., 2013; Marshall & Schrank, 2014). The complexity of the disaster recovery processes enhances the disorderly manner of disaster recovery (Jordan & Javernick-Will, 2013).

The chaos theory framework is a useful tool to understand how to manage transitional change from a negative stance. Transitional change includes moving from a position of discouragement, disillusionment, and hopelessness to one of positive coping attributes such as optimism, encouragement, and hopefulness (Bussolari & Goodell, 2009; Farazmand, 2004). Each transition cycle contributes to expanded skills for positive coping (Faggini & Parziale, 2016; Farazmand, 2004). Over time, managers can recognize

environmental change as the doorway to growth and to new, not-yet-imagined possibilities and connections (Bussolari & Goodell, 2009; Farazmand, 2004).

A central principle of chaos theory is that systems tend to self-organize to eventually exhibit unique patterns of behavior to adapt to continuing challenges to overcome chaos (Faggini & Parziale, 2016; Holland, 1995). The chaos theory is useful to increase an understanding of the shift between order and chaos that is indicative of transition and emphasizes stability and transformation (Bussolari & Goodell, 2009). The stakeholder theory provided a perspective for understanding the strategic benefit of postdisaster sustainability and business continuity planning for firms to recover in a postdisaster environment. It also prescribes action for organizational managers (Bussolari & Goodell, 2009; Freeman, 2010; Hillman & Keim, 2001).

Freeman (2010) developed the stakeholder theory in 1984. The stakeholder theory is used to investigate how firms engage stakeholders that affect the organization as well as stakeholders that the organization's actions affect (Freeman, 2010; Hillman & Keim, 2001). Business leaders engage with disaster-affected communities through their stakeholder relationships (McKnight & Linnenluecke, 2016). Rogers (2016) asserted that the stakeholder theory is a valid conceptual framework for small business research studies.

Governments, community organizations, owners, consumer advocates, suppliers, customers, competitors, and employees are stakeholders in the business and business managers engage with disaster-affected communities through their stakeholder relationships (Freeman, 2010; McKnight & Linnenluecke, 2016; Rogers, 2016). The

stakeholder theory is used to study how business managers can achieve firm-level objectives through stakeholder management benchmarks such as improved process, improved financial performance, and enhanced regulatory processes (McKnight & Linnenluecke, 2016). The stakeholder theory provided a lens for understanding the strategic advantage of postdisaster sustainability and business continuity planning for firms to restore and maintain operations in a postdisaster environment.

The complexity of disaster recovery systems and processes enhances the disorderly manner of disaster recovery (Han & McKelvey, 2016; Jordan & Javernick-Will, 2013). As a small business owner who maintained operations in the aftermath of Hurricanes Katrina, Rita, Ike, and Gustav, I understand the chaos that exists after of a disaster. Developing a strategy without a pre-established plan exacerbates difficulties in rebuilding and creates additional problems that may affect the small businesses owner personally as well as professionally. Disaster recovery involves complex, dysfunctional systems, and small business owners must adapt to the changing environment as participants in the complex system (Chinh et al., 2016; Jordan & Javernick-Will, 2013; Marshall & Schrank, 2014; Ozturk & Kizilkaya, 2017). postdisaster recovery planning allows small business owners to focus on a program for recovery systems to implement effective processes and employ resources available for rebuilding.

Community Resilience and Small Business Recovery

The United States Small Business Administration has been the authority on defining what is or is not a small business (Anastasia, 2015). The criteria for the classification of small businesses include a full range of business types and sizes (Dilger,

2018). The United States Small Business Administration (2018) defined a *small business* as manufacturing companies with 500 employees or fewer and non-manufacturing businesses with average annual revenues of less than \$7.5 million. Criteria vary depending on the industry (United States Small Business Administration, 2018). Small business enterprises with fewer than 100 employees comprise the most significant portion of small business employment (Anastasia, 2015; Turner & Endres, 2017). In a postdisaster environment, small business recovery and sustainability are important to economic recovery for the affected region (Chamlee-Wright & Storr, 2014; Marshall & Schrank, 2014; Turner & Endres, 2017).

Small business recovery is a partnership effort among the community; the small business owner's family, customers, and suppliers (Chamlee-Wright & Storr, 2014). Business leaders must understand the factors that influence re-investment (Schrank et al., 2013). Barkhatov, Pletnev, and Campa (2016) emphasized that small businesses performance and operations are indicators of societal changes. Small businesses operate within a complex social system which must be understood to analyze the environment in which the small business owner must operate (Sahebjamnia, Torabi, & Mansouri, 2018; Sahebjamnia, Torabi, & Mansouri, 2015; Schumann, 2013).

Small business disaster recovery is a continuous process that involves interconnected people and organizations encompassing a wide range of factors that may change over time (Doern, 2016; Jordan & Javernick-Will, 2013; Marshall & Schrank, 2014). Small businesses operate in an open system with input from the environment and outputs to the environment and natural disasters have a significant economic impact on

the affected small businesses (Chamlee-Wright & Storr, 2014; Green, Kouassi, & Mambo, 2013; Marshall & Schrank, 2014; Segatto, DePadua, & Martinelli, 2013). Community stakeholders must respond to rebuild communities in a postdisaster environment (Greenberg, 2014). postdisaster recovery and sustainability planning helps minimize some of the disaster-related stress and time to resume business operations (Han & McKelvey, 2016; Nepal et al., 2018; Nicoll & Owens, 2013; Phelps, 2014; Schumann, 2013).

Small business disaster recovery is an ongoing partnership involving the small business owner as well as stakeholders (Marshall & Schrank, 2014). An essential component of disaster recovery is the identification of successful resourcing practices to benefit community leaders, housing industry practitioners, and disaster recovery officials to understand, visualize, coordinate, and efficiently manage postdisaster entrepreneurial concerns (Chang et al., 2012; Hart & Jones, 2013; Lam et al., 2012). In the uncertain economic environment following a large-scale natural disaster, small business managers must understand the factors that influence re-investment (Marshall & Schrank, 2014). The political climate, investment funding sources, and the outlook for small business sustainability influence the decision to invest (Doern, 2016; Green et al., 2013; Lam et al., 2012; Leleu et al., 2013).

Disaster Recovery Strategies

Small businesses are significant economic contributors, and postdisaster sustainability planning is essential to increase the small business owner's ability to re-establish operations and contribute to community redevelopment (Marshall & Schrank,

2014; Schrank et al., 2013). In the aftermath of disasters, many small business managers miss opportunities for assistance because of a lack of planning and access to information resources (Hart & Jones, 2013; Nepal et al., 2018; Rossmiller, Lawrence, Clouse, & Looney, 2017). According to Kim (2011), the market in the tri-state region of Alabama, Louisiana, and Mississippi is homogenous with linkages among residential sales prices, interest rates, and per capita income. Although disaster recovery at the federal level begins with the presidential declaration of disaster, community stakeholders must lay the groundwork for recovery prior to a disaster because the various economic, financial, social, human, and educational factors that exist at the time of the disaster influence the resilience of every entity affected (Marshall & Schrank, 2014).

postdisaster recovery strategies are especially important for communities because effective sustainability and recovery strategies in the small business sector are correlated with reduced economic vulnerabilities in small business owner dominated areas (Schrank et al., 2013). A postdisaster recovery plan provides a small business manager with the tools and resources available to obtain with local and federal assistance applications as well navigate insurance claims, supplier availability, and employee statuses (McKnight & Linnenluecke, 2016; Nepal et al., 2018; Nicoll & Owens, 2013; Sullivan, 2016). Insufficient research exists regarding small business managers' ability to manage sustainability operations after a natural crisis (Doern, 2016; Han & McKelvey, 2016; Turner & Endres, 2017).

The level of skill and expertise of the small business owner directly influences business performance (Chinomona, 2013). Small business owners who lacked the

necessary knowledge to understand the likely impact of their decisions on the sustainability of the business were more likely to make choices that increased risk and reduced likelihood of long-term sustainability (Hsu, Wiklund, & Cotton, 2017). Managers of small real estate businesses must actively engage in disaster planning (Chinomona, 2013; Hsu et al., 2017; Nicoll & Owens, 2013).

As disasters increase in occurrence, small business leaders must have plans in place to resume operations as soon as possible in the wake of a crisis (Phelps, 2014; Marshall, 2014). Effective business managers must transform and respond to unplanned interruptions promptly (Marshall, 2014; Nicoll & Owens, 2013; Phelps, 2014; Turner & Endres, 2017). Managers who possess the ability and skills to innovatively and effectively respond to disasters will be poised to re-enter commerce more competitively (Brancati, 2015; Jansson, Nilsson, Modig, & Vall, 2017; Mazzei, Flynn, & Haynie, 2016; Phelps, 2014; Purcarea, Maria del Mar, & Apetrei, 2013). Uninformed decision making by small business leaders results in poor capital investment decisions, which could influence business performance and sustainability (Dickins, Gibson, Harris, & McDowell, 2016; Frid, 2015; Ilic, 2014).

Management Skills, Resources, and Innovation

Education is a fundamental component necessary for entrepreneurs to have viable, sustainable ventures; and to increase the ability to lead the organization through an unplanned interruption (Chinomona, 2013; Hsu, et al., 2017; Ilic, 2014; Phelps, 2014; Sarmiento, Hoberman, Jerath, & Jordan, 2016). Education level influences financial decisions and SME owners who are not at ease using financial statements to inform their

choices tend to use the statements less than owners who exhibited more proficiency (Atsan, 2016; Hsu et al., 2017; Kozan & Akdeniz, 2014). Advanced education levels increase the likelihood that business owners have access to traditional debt and investment funding opportunities for viable, sustainable entrepreneurial ventures (Hsu et al., 2017; Kozan & Akdeniz, 2014).

Young, well-educated, entrepreneurs with professional experience and a family history of entrepreneurship find support from external resources such as business incubators most useful (Albort-Morant & Oghazi, 2016). The new generation of entrepreneurs is more receptive to the use of consultants, technology, expert resources, and collaboration to aid strategic decision making regarding financial decisions (Albort-Morant & Oghazi, 2016; Strakova, 2017). Small business success directly correlates with the small business manager's investment in small business employees regarding training and involvement in the business (Pletnev & Barkhatov, 2016). Employee perception of the work environment directly impacts business success (Sullivan, 2016). Employees who perceived that the manager appreciated them and their contribution to the business felt more appreciated and less oppressed (Pletnev & Barkhatov, 2016). Small business owners contribute to improved business performance and sustainability by continuously investing in skills training for themselves and their employees to generate more revenue and maintain viability and effectively respond to unplanned business interruptions (Chinomona, 2013).

A small business leader must have the necessary skills to perform a full range of managerial functions to be successful and invest in skills training for employees

(Chinomona, 2013; Hsu et al., 2017; Pletnev & Barkhatov, 2016; Sarmiento et al., 2016). Managers must have the appropriate skills, training, and education to lead and motivate employees as well as make informed strategic operating and planning decisions (Albort-Morant & Oghazi, 2016; Chinomona, 2013; Hsu et al., 2017; Phelps, 2014; Pletnev & Barkhatov, 2016). Employee skills training has stronger effects on small businesses performance than the small business owners' expertise, which emphasizes the importance of employees' skills training in the small business (Chinomona, 2013; Hsu et al., 2017; Turner & Endres, 2017). Skill development and training is a critical component of small business success (Bryant & Allen, 2013; Hsu et al., 2017; Pletnev & Barkhatov, 2016). Training and tools, such as templates to assist with postdisaster plan development, are available from various free resources such as the Federal Emergency Management Agency, SCORE, the United States Small Business Administration, and the Chambers of Commerce (Albort-Morant & Oghazi, 2016; Bandura & Lyons, 2015; United States Small Business Administration, 2017).

Effective small business leaders must continuously develop the skills to implement business continuity plans (Bryant & Allen, 2013; Hsu et al., 2017; Phelps, 2014). Effective strategic planning processes are essential for managers to overcome business disruptions and maintain long-term sustainability (Pletnev & Barkhatov, 2016; Phelps, 2014; Sarti, 2014; Strakova, 2017). Some small business leaders face cost constraints in developing effective strategic planning practices, including the development of postdisaster sustainability plans.

After the 2005 hurricane season, there were disparities in information regarding real estate values in the affected regions depending on the type of appraiser used for property valuations (Zhu & Pace, 2012). Experienced licensed appraisers had less than 3% error in valuations versus unlicensed, inexperienced appraisers (Zhu & Pace, 2012). Small business owners with advanced levels of education and training experienced an increased likelihood that the business owners had access to traditional debt and investment funding opportunities (Chinomona, 2013; Hsu et al., 2017; Phelps, 2014). The scarcity of entrepreneurial education related to innovation management, financial management, and partnerships hinders small business sustainability and resumption of business service after a disaster (Brancati, 2015; Coleman, Cotei, & Farhat, 2016; Comeig, Fernandez-Blanco, & Del Brio, 2014; Dhakal, 2015; Frid, 2015; Omri, Frikha, & Bouraoui, 2015; Purcarea, et al., 2013; Wang & Wang, 2013).

Small business owners' failure to establish relationships with partners, acquire necessary financial skills, and lack of critical information and mentoring contribute to small business failure (Atsan, 2016). Interpersonal relationships are an essential component of developing business relationships to facilitate sustainability and long-term success (Albort-Morant & Oghazi, 2016; Atsan, 2016; Phelps, 2014; Purcarea et al., 2013). Most leaders of small business consider networking with external partners an integral source of learning, an effective way to monitor competitor action, an avenue to stay abreast of technological innovations, and an avenue to gather and utilize information collected from industry experts and independent consultants as sources of strategic information (Alasadi & Al Sabbagh, 2015; Atsan, 2016; Phelps, 2014; Purcarea, et al.,

2013). Small business operators must improve relationships with key stakeholders such as employees, customers, suppliers, and communities to increase financial returns by developing intangible but valuable sources of competitive advantage (Freeman, 2010). Owners of small real estate businesses must network and monitor market demand, trends, occupancy and valuations to facilitate small business asset acquisition, financing and investment to reestablish operations postdisaster and maintain long-term sustainability.

A lack of small business owner managerial skills and innovation leads to business failure (Alasadi & Al Sabbagh, 2015; Heinze, 2013; Ilic, 2014). Owners of small and emerging businesses who are not at ease using financial statements to inform their decisions tend to use the statements less than owners who exhibited more proficiency (Hsu et al., 2017; Price, 2013; Wang & Wang, 2013; Zhu & Pace, 2012). Small business leaders must be innovative in operations management and must increase their ability to identify opportunities for skills development, financing, and innovation (Brancati, 2015; Ilic, 2014; Mazzei et al., 2016; Purcarea et al., 2013). Six inhibitors to innovation are: scarcity of financial resources and lack of access to funding opportunities, absence of (or deficiency in) skills in innovation management, ineffective use of procurement opportunities to stimulate innovation, inability to manage innovative processes, poor networking practices, and little or no cooperatives with external entities (Purcarea et al., 2013).

Leaders of small real estate companies must be innovative to understand real estate market demand and recovery. The new generation of entrepreneur views market changes, innovations in technology and information gathered from industry experts, and

consultants as sources of external knowledge but many are unaware of the avenues to access such resources (Purcarea et al., 2013). Networking is valuable for small business managers to build a value chain of resources to facilitate funding and innovation to promote sustainability (Albort-Morant & Oghazi, 2016; Greenberg, 2014; Purcarea et al., 2013). Small business managers must stay informed of programs such as the Goldman Sachs 10,000 Small Businesses and the nationwide Small Business Development Centers which exist to facilitate knowledge and training pertinent to small business success (Delgado Community College, 2018; United States Small Business Administration, 2018). Small business stakeholders must increase the ability to identify opportunities for innovation and sustainability (Babson College, 2016; Brancati, 2015; Dhakal, 2015; Purcarea et al., 2013). Small business owners must develop postdisaster recovery plans to decrease dependence upon government-funded intervention for the resumption of operations and long-term sustainability after a natural disaster.

Access to capital is an integral component of small business success (Babson College, 2016; Dhakal, 2015). Restricted access to financing for small business ventures is a constraint to business growth, sustainability, and job creation while improved access to capital stimulates job creation (Dhakal, 2015; Dickins et al., 2016; Ilic, 2014).

Business managers need to understand financial options for small businesses as well as the loan processes, documentation requirements, and credit scoring processes (Brancati, 2015; Coleman et al., 2016; Comeig et al., 2014; Dhakal, 2015). Dhakal (2015) found that financial literacy and access to funds is necessary for small business sustainability. An entrepreneur's characteristics and knowledge regarding capital investment decisions

and awareness of funds availability influence the financing decision (Coleman et al., 2016; Gupta & Muita, 2013; Hazudin, Kader, Tarmuji, Ishak, & Ali, 2015). The scope of duties of a small business leader might be so broad that the business owner may not be sufficiently skilled or knowledgeable to carry out the entire range of administrative functions (Hazudin et al., 2015).

A small business leader must have the necessary skills to perform a full range of managerial functions to be successful (Coleman et al., 2016; Dickins et al., 2016; Gupta & Muita, 2013; Hazudin et al., 2015). Limited financial experience and overconfidence often lead to unsuitable business decisions (Hsu et al., 2017; Li, 2015). Many entrepreneurs are not even able to determine the legal form of the business enterprise, which is a primary factor that, among other factors, affects identification of financing sources and influences the small business owner's ability to detect and apply for financing opportunities (Mikic, Novoselec, & Primorac, 2014). Business owners, or relatives of the owners, usually manage small businesses. Small business owners tend to use self-financing methods as the primary source of capital funding and continue to pursue personal debt and equity, often in the form of private property mortgages or savings, as the business matures and develops (Dickins et al., 2016; Frid, 2015; Gupta & Muita, 2013).

Dickins, Gibson, Harris, and McDowell (2016) led a university study to examine small business owner financial literacy and its relationship to the business owner's satisfaction with their business. The researchers collected the data via a survey issued to 63 small businesses with an average operation time of 21.3 years. The study consisted of

five multiple-choice questions addressing the cost of capital, financial statements, economic failure, tax implications of a change in business ownership, and knowledge of how to value small businesses (Dickins et al., 2016). The average small business owner lacks enough financial literacy to make informed capital investment decisions (Dickins et al., 2016; Frid, 2015; Gupta & Muita, 2013). Small real estate firms facilitate access to capital investment opportunities, assets, repair funds, and financing in the aftermath of a disaster.

In the aftermath of a large-scale natural disaster, business managers must understand the factors that influence re-investment (Leleu et al., 2013; Schrank et al., 2013). Many political factors affect investment funding, the sources of funding, and the predictors for small business sustainability (Green et al., 2013; Guajardo, 2013; Leleu et al., 2013). In the aftermath of Hurricane Katrina, political leaders focused more on the interests of developers and big businesses in the restoration of New Orleans than the interests of small businesses and the working-class residents; as a result, many local companies ceased operations (Green et al., 2013; Lacho & Eness, 2011; Parthasarathy, 2015). Identifying and applying for sources of financing is a significant problem affecting small business sustainability after a disaster (Mikic et al., 2014).

A small business leader's unwillingness to seek external funding in the form of equity limits their access to and use of financial resources (Babson College, 2016; Dickins et al., 2016; Frid, 2015). Banks are averse to lending to small business enterprises with limited capital and often demand collateral that many small business leaders are unable to provide (Dickins et al., 2016; Frid, 2015). Entrepreneurs in start-ups

can raise financing from numerous sources, such as accelerators and incubators, proof-of-concept centers, university-based seed funds, crowdfunding platforms, real estate mortgages and IP-backed financial instruments (Frid, 2015; Yiu, Su, & Xu, 2013). Moreover, contrary to conventional accounts of startup activity, research further shows that new entrepreneurial firms heavily rely on external debt sources, including bank financing (Yiu et al., 2013). Considering the importance of entrepreneurial firms for the overall economic system and the small business owner's reliance on collateral assets such as real estate holdings, there is a need for research on these distinct sources of financing to understand how they influence start-ups (Schrank et al., 2013; Yiu et al., 2013).

Economic Impact

Small businesses comprise over 99.9% of firms that employ approximately 48% of private sector employees (United States Small Business Administration, 2017). The hurricanes of 2005 resulted in extensive, costly economic damages and the large-scale disruption and closures of small business enterprises (Federal Emergency Management Agency, 2018; Greenberg, 2014; Lacho & Eness, 2011; Marshall, 2014; Marshall & Schrank, 2014; United States Small Business Administration, 2017). In 2005, Hurricane Katrina devastated the commercial and residential real estate market in the Greater New Orleans area and overwhelmed the government officials (Guajardo, 2013). Natural disasters have an economic impact on the affected communities, and the uncertainty of organizational systems in the aftermath of Hurricane Katrina illustrates the attempts by systems to create order from the resultant chaos (Green et al., 2013; Leleu et al., 2013; Marshall & Schrank, 2014).

Marshall (2014) reaffirmed the importance of rebuilding sustainable operations capable of participating in a global economy to increase performance and productivity. In most cases, there is no shortage of disaster funds or commodities in the wake of a natural disaster but, instead, poor governance often results in ineffective recovery operations (Sardana & Dasanayaka, 2013). Data from government and independent research sources warrant further inquiry in the areas of urban planning regarding the best practices for establishing small business commerce in the wake of a large-scale natural disaster (Chang et al., 2012; Sardana & Dasanayaka, 2013). Research regarding postdisaster recovery assistance is especially important for small businesses because it leads to increased preparedness and recovery strategies for the small business sector and reduced economic vulnerabilities in areas dominated by small business owners (Schrank et al., 2013).

Additional research was necessary to further an understanding of the core recovery systems of the business and the corresponding systems of family and community recovery (Doern, 2016; Marshall, 2014). Thiede and Brown (2013) posited that in the event of a natural disaster, social networks, information attainment, and geographic location also affected disaster response behavior. Natural disasters have an economic impact on small business and the affected communities (Doern, 2016; Green et al., 2013; Thiede & Brown, 2013). The real effects of entrepreneurship are significant, especially regarding economic growth (Ilic, 2014). Effective resourcing processes help community leaders, housing industry professionals, and disaster recovery officials to understand, visualize, coordinate, and manage postdisaster housing concerns (Been,

Ellen, & Weselcouch, 2014; Chamlee-Wright & Storr, 2014; Greenberg, 2014; Marshall, 2014).

Small businesses are vital to the national economy and are indicative of societal changes (Barkhatov et al., 2016). Hurricane Katrina was the most significant residential disaster in U.S. history and affected a diverse socioeconomic area with extensive damage (Josephson & Marshall, 2016). The state-level monetary policy has a substantial impact on the commerce via the economic income effect and the United States federal government determined that the cost of devastation in the city of New Orleans was too expensive to repeat (Kim, 2011; Josephson & Marshall, 2016).

Small businesses operate within a complex social system which must be understood to fully grasp the extent of the small business' economic environment (Sahebjamnia et al., 2018; Schumann, 2013). For a small business, recovery is a partnership effort between the community, the owner's family, and its customers (Chamlee-Wright & Storr, 2014). In the aftermath of a large-scale natural disaster, it is essential to understand the factors that influence re-investment (Schrack et al., 2013). Successful postdisaster planning helps community leaders, housing industry professionals, and disaster recovery officials to understand, visualize, coordinate, and effectively manage postdisaster concerns to increase community resilience (Been et al., 2014; Chang et al., 2012; Lam et al., 2012).

Small businesses firms employ approximately 48% of private sector employees (United States Small Business Administration, 2018). The hurricanes often result in extensive, costly economic damages and the large-scale disruption and closures of small

business enterprises (Federal Emergency Management Agency, 2018; Greenberg, 2014; Lacho & Eness, 2011; Marshall, 2014; Marshall & Schrank, 2014; United States Small Business Administration, 2017). Disaster relief aid increases property values, decreases the actual cost to rebuild, creates unpleasant feelings in areas less funded, increases waste, and creates an atmosphere of lethargy when not allocated efficiently and effectively (Shughart, 2011).

The 2005 Hurricane Katrina resulted in extensive commercial and residential real estate damages in the Greater New Orleans area, and the population declined from approximately 497,000 to 211,000 immediately after the storm (Guajardo, 2013). In the aftermath of Hurricane Katrina, the state-level monetary policy had a substantial impact on the real estate market via the economic income effect (Kim, 2011). Most local small businesses, including local real estate enterprises, ceased operations and the federal government determined that the cost of devastation in the city of New Orleans was too expensive to repeat (Kim, 2011; Olshansky & Johnson, 2014). The regional economic market has strong homogenous with linkages among residential sales prices, interest rates and per capita income (Kim, 2011). The impact and aftermath of Hurricane Katrina on real estate valuations in the city of New Orleans and the rest of the affected region have inferences for real estate taxes in cities prone to natural disasters (Guajardo, 2013; Kim, 2011; Lacho & Eness, 2011).

Another illustration of the importance of real estate firms to business and industry is the 2009 market crash. In 2009, the real estate market crash contributed to a global economic crisis of such significance that the United States Gross Domestic Product

decreased -0.5%, global trade registered a -12% loss and only the unemployment labor index increased (Barkhatov et al., 2016). Small businesses are the original creators of the middle class, which drives economic growth through consumption and leads to increased demand for goods that generates new market segments for new small businesses (Barkhatov et al., 2016). Further research was necessary regarding small real estate business disaster planning because they are significant economic contributors to societal redevelopment (Marshall & Schrank, 2014).

The devastation resulting from Hurricane Katrina resulted in more than \$108 billion in damages (Josephson & Marshall, 2016). The estimated actual value of taxable property is likely to decrease immediately after a natural disaster dependent upon the magnitude of the devastation but then increase in the years after the catastrophe (Guajardo, 2013). For example, after Hurricane Katrina in 2005, at year-end 2008, the estimated actual value of real property was about \$17.2 billion, higher than pre-Katrina costs estimated at \$12.1 billion in 2004 (Guajardo, 2013). Small business owners with little or no home equity and no postdisaster recovery plan are often faced with limited personal capital access to sustain operations immediately after a disaster and are unable to maintain services until the real estate market recovers (Chinh et al., 2016; Comeig et al., 2014; Marshall, 2014). Small and emerging businesses with little to no collateral experience higher interest rates and an increased likelihood of failure (Comeig et al., 2014).

Profit-generating small business enterprises are significant contributors to economic growth and development (United States Small Business Administration, 2017).

In the event of a natural disaster, social networks, information attainment, and geographic location affect disaster response behavior (Albort-Morant & Oghazi, 2016; Marshall & Schrank, 2014; Thiede & Brown, 2013). In the aftermath of Hurricane Katrina, many small business leaders did not receive necessary assistance due to miscommunication and limited information channels (Greenberg, 2014; Josephson & Marshall, 2016; Marshall, 2014). Research conducted by Sardana and Dasanayaka (2013) indicates that there was often no shortage of either disaster funds or commodities in the wake of a natural disaster, but inadequate governance often resulted in ineffective recovery operations (Sardana & Dasanayaka, 2013).

Small business postdisaster sustainability planning is necessary to identify the fundamental recovery systems of a small business and the corresponding stakeholder systems (Doern, 2016; Marshall, 2014; Phelps, 2014). postdisaster recovery planning is especially important for small businesses because it improves disaster response and recovery strategies for the small business sector and reduces economic vulnerabilities in areas dominated by small business owner (Schrank et al., 2013). Successful resourcing practices benefit small business stakeholders by enabling them to understand, visualize, coordinate, and effectively manage postdisaster housing concerns (Chang et al., 2012; Lam et al., 2012).

Postdisaster Sustainability Planning

Modern leaders of small businesses operate in continuously changing environments and, to maintain sustainability, must unceasingly adapt and respond to change (Henkel, Bider, & Perjons, 2014; Phelps, 2014). The most prevalent external

factors affecting business failure are economic conditions, changes in government policies, and uncontrollable unplanned business disruptions (Atsan, 2016). The overall effects of climate change and weather-related disasters of all types are the leading concern for corporate risk experts (Phelps, 2014). Effective postdisaster business continuity planning is vital to small business sustainability (Chinh et al., 2016; Christofi, Nunes, Chao Peng, & Lin, 2013; Cragg, Mills, & Suraweera, 2013; Phelps, 2014; Rossmiller et al., 2017).

Planning is not predicting; it is the preparation using educated guesses based on historical data regarding current and future events (Cordeiro, 2013). postdisaster sustainability planning is vital to long-term sustainability for businesses in natural disaster-prone areas (Chinh et al., 2016; Chinomona, 2013; Doern, 2016; Henkel et al., 2014). Josephson and Marshall (2016) asserted that in the aftermath of Hurricane Katrina, there was much disparity and no consistency in how the United States Small Business Administration allocated disaster assistance funding to small businesses. Business managers must develop effective business-models as a central component of strategic management (Chinh et al., 2016; Phelps, 2014; Ritter, 2017). Small business managers cannot rely upon disaster aid as the sole means of assistance in resuming and maintaining operations and sustainability after a natural disaster. Organizational management must improve capabilities to respond to unplanned business interruptions to increase organizational development and operational efficiencies to maximize profitability and sustainability (Chinh et al., 2016; Chinomona, 2013; Henkel et al., 2014).

Timely recommencement of business operations after an unplanned business disruption is vital to business sustainability (Chinh et al., 2016; Heinze, 2013; Sahebjamnia et al., 2018; Skokan, Pawliczek, & Piszczur, 2013; Torabi, Giahi, & Sahebjamnia, 2016). Small business owners face exacerbated economic difficulties in the wake of a natural disaster due to limited access to information and resources (Chinh et al., 2016). Small business owners must establish operational sustainability planning processes for improved performance and increased earnings for long-term sustainability (Phelps, 2014; Sahebjamnia et al., 2018; Sahebjamnia et al., 2015).

To maintain strategic agility, small business managers must develop and implement effective responses to rapidly changing business environments and unplanned business interruptions (Chinh et al., 2016; Liu, Xu, & Han, 2013; Sahebjamnia et al., 2015). Business continuity planning must be a routine part of business as it is an effective strategy to address business disruption planning and many organizations use business continuity management systems to develop and implement business continuity plans (Phelps, 2014; Porter, 2016; Torabi et al., 2014; Sahebjamnia et al., 2018). An increase in the number of natural and fabricated disruptions has prompted the need for better continuity planning for businesses, which is a useful tool for effective responses to business disruptions (Phelps, 2014; Sahebjamnia et al., 2018; Torabi et al., 2016).

Chaos theorists assert that everything is continually changing, and that transformation is unavoidable in a developing world, so organizations must adapt to change (Ozturk & Kizilkaya, 2017). The stakeholder theory purports that firms that contract with their principal stakeholders based on shared confidence and collaboration

maintain a competitive advantage over firms that do not, all other factors equal (Freeman, 2010). The most common internal factors that affect small business failure are relationships with partners, financial skills, and lack of critical information (Atsan, 2016; Batistella, DeToni, De Zan, & Pessot, 2017; Kozan & Akdeniz, 2014). Small business owners are responsible for business continuity processes including innovation, marketing, sales, management, human resources, and capital development (Phelps, 2014). Small business managers must maintain the training, skills, and peer networks necessary to maintain business continuity (Atsan, 2016; Phelps, 2014).

Business enterprises are open systems functioning in risky, uncertain, and constantly evolving environments (Carayannis, Sindakis, & Walter, 2015; Phelps, 2014). Business managers strive to balance stability and consistency with flexibility and response to change to achieve operational efficacy and organizational sustainability (Carayannis et al., 2015). Continuation of business operations in the wake of any unplanned disruption is vital to business sustainability (Torabi et al., 2014). After a large-scale natural disaster, comprehensive, sustainable disaster recovery requires that stakeholders take advantage of all available tools to redevelop old real estate properties and revitalize neighborhoods (Marshall, 2014). Strategies that owners of small real estate businesses use to respond to change and how to develop business planning to maintain sustainability was not well understood (Achtenhagen, Melin, & Naldi, 2013).

Insufficient research existed regarding effective, comprehensive business strategies for profit-oriented entrepreneurial ventures (Doern, 2016; Han & McKelvey, 2016; Turner & Endres, 2017). Business owners who lack the necessary knowledge to

understand the effect of their decisions on the sustainability of the business are more likely to make choices that increase risk and reduce growth and viability (Hsu et al., 2017). Limited experience and overconfidence often lead to unsuitable business decisions (Hsu et al., 2017). Entrepreneurs that can effectively reconfigure their skills and business processes as needed are apt to be more innovative and competitive, and experience increased sustainability (Carayannis et al., 2015).

Basile and Faraci (2015) asserted that the development of managerial capabilities, the investment in talent development, and synchronicity between the management business model philosophies and the business model are critical to organizational sustainability in a crisis framework. Disasters are increasing in frequency and are therefore affecting a larger number of people, businesses, and real estate in the affected regions (Marshall, 2014; Mayner & Arbon, 2015; Sahebjamnia et al., 2018). Small businesses that provide construction, real estate, rental and leasing services comprise approximately 20% of all small firms in the United States (United States Small Business Administration, 2018). Business continuity management is a product of disaster recovery planning processes developed in response to operational and technical organizational risks first identified in the 1960s and 1970s (Liu et al., 2013; Phelps, 2014).

Business continuity (BC) and business continuity management (BCM) have become effective tools for crisis management (Ivanus & Repanovici, 2016; Phelps, 2014; Porter, 2016; Torabi et al., 2014). Business continuity management is a management method which includes the identification of internal and external risks, assesses the potential impact to the organization, and develops a framework for organizational

resilience (Ivanus & Repanovici, 2016; Porter, 2016; Torabi et al., 2014). The most important aspect of business continuity management is that it facilitates potential risk identification and mitigation (Liu et al., 2013; McKnight & Linnenluecke, 2016).

BC and BCM focus on business processes and organizational resiliency (Ivanus & Repanovici, 2016). BCM has six necessary attributes (Torabi et al., 2014). The BC Manager must be experienced or trained in business continuity program management, possess competence, have an awareness of the culture of the organization, have a complete and thorough understanding of the organization, be adept at the selection of BC options, develop and implement the BC response, and continuously exercise and test the developed plans (Torabi et al., 2014).

Porter (2016) identified seven main development areas to help build the foundation of a successful and high-performing business continuity management team very similar to those developed by Torabi et al. (2014). First, secure executive level support to establish why business continuity planning is essential and the benefits to the organization, make a case for business continuity and get buy-in from management to participate (Porter, 2016). This step also involves performing an internal audit to assess the organization's business continuity management's capabilities against any specific regulatory and compliance requirements to identify the most experienced personnel to contribute to the team (Porter, 2016). Although the organization's safety professionals may seem like the apparent team members, it is to the organization's benefit to building a team of experts from different areas of the organization to optimize planning (Nicoll & Owens, 2013).

Establish an organizational crisis leader to serve as the chair of business continuity management (Porter, 2016). The leader is a coordinator; representatives with knowledge from each department must participate in the planning process (Nicoll & Owens, 2013). The BCM must clearly define and obtain consensus on organizational process criticality and priority (Porter, 2016). BCM must address all critical processes by including qualified and experienced members from every department (Nicoll & Owens, 2013; Porter, 2016). Next, properly train all members of the BCM with applicable certifications and establish a central source of truth and capability (Porter, 2016).

The BCM team ensures that BCM uses organization-wide resources (Porter, 2016). Business continuity management should coordinate with all organizational departments to identify available resources in developing the most effective, cost-efficient continuity processes (Nicoll & Owens, 2013; Porter, 2016). In step six, the BCM focuses on organizational resilience to mitigate unexpected business interruptions (Porter, 2016). BCM members must be familiar with or trained in risk assessment and mitigation processes (Nicoll & Owens, 2013). Finally, as the business continuity management framework matures, the BCM must focus on maintaining a resilient organization by continuously reviewing and testing processes for effectiveness and efficiency (Porter, 2016). The plan must be formal and effectively communicated by the BCM team, the members of which must be committed to the policy (Nicoll & Owens, 2013). The BC plan must be implemented, reviewed often and regularly revised to benefit the organization (Cordeiro, 2013).

The National Fire Protection Association (NFPA) standard 1600 regarding Disaster and Emergency Management and Business Continuity Plans is the national preparedness standard (Nicoll & Owens, 2013). There are eight phases of business continuity planning, which are like the seven steps to developing an effective BCM team. Phase one of the plan incorporates program management. Management support for established goals, objectives, budget, schedules, and established milestones is significant (Nicoll & Owens, 2013). Appoint a coordinator and complete a risk assessment that includes a business impact analysis (Nicoll & Owens, 2013). Develop disaster and hazard mitigation and prevention strategies and plans (Nicoll & Owens, 2013). Identify available resources by conduction GAP analyses and establish agreements as necessary and establish an emergency operations plan, business continuity plan, and the communication strategy (Nicoll & Owens, 2013). Next, develop training materials, implement required training sessions, test processes and evaluate and review the BC plan (Nicoll & Owens, 2013). Finally, conduct an annual review and revise as necessary (Nicoll & Owens, 2013).

Business managers must understand the unique aspects of disaster recovery when developing the plan for postdisaster business continuity and understand that multiple disruptions could coincide (Sahebjamnia et al., 2018). Nicoll and Owens (2013) emphasized that this is an organization-wide plan that must have participation from management from all areas of the organization. Risk assessment and mitigation and business impact analyses are critical functions for all businesses and especially for small partnerships and family-owned businesses, where many managers do not embrace how

important business continuity planning is too long-term sustainability (DaSilva & Trkman, 2014; Nicoll & Owens, 2013; Phelps, 2014; Sahebjamnia et al., 2015; Skokan et al., 2013; Torabi et al., 2016). Regardless of the size or type of small business, postdisaster business continuity planning is imperative to maintain vital functions such as personnel staffing, technological services, and revenue generation, in a postdisaster community (DaSilva & Trkman, 2014; Nicoll & Owens, 2013; Phelps, 2014; Sahebjamnia et al., 2015; Torabi et al., 2016).

Phelps (2014) further stressed that managers be innovative, question everything, be creative, pursue continuing education opportunities, network, and be proactive. Business managers must continuously identify resources, develop and refine the organization's strategic capabilities, and modify business processes in an effective and timely manner as opportunities and threats occur (DaSilva & Trkman, 2014; Phelps, 2014; Torabi et al., 2016). Small business owners must embrace business continuity and sustainability planning to remain strategically competitive (Jansson et al., 2017; Sahebjamnia et al., 2015; Torabi et al., 2016). The business environment is ever-changing, and so must continuity planning evolve to promote business sustainability, especially in the aftermath of an unplanned, unpreventable natural disaster (Batistella et al., 2017; Chinh et al., 2016; DaSilva & Trkman, 2014; Greenberg, 2014; Marshall & Schrank, 2014; Phelps, 2014; Sahebjamnia et al., 2015).

Transition

Section 1 included a discussion of several parts of this study: (a) foundation of the study, (b) the background of the problem, (c) a general and specific statement of the

problem, (d) the purpose statement, (e) the conceptual framework of the study, (f) the research question, and (g) the open-ended interview questions. Section 2 includes details about the research project, purpose of the study, role of the researcher, participants, research method and design, population and sampling, and ethical research. In Section 2, I discuss data collection including data collection instruments, data collection techniques, data organization techniques, and data analysis. I also discuss reliability and validity, as well as how the study meets quality standards.

Section 3 of the research study includes an overview of the study. My discussions in Section 3 include a presentation of the findings, applications to professional practice, and implications for social change. In Section 3, I present recommendations for further study, reflections learned during the doctoral study journey, and the conclusion.

Section 2: The Project

This section includes the role I played as a researcher and the sampling techniques, as well as the role of the study participants. I also outline how I collected and analyzed the data. In conclude this section with the importance of the reliability and validity of the research process.

Purpose Statement

My purpose in this qualitative multiple case study was to explore strategies that leaders of small real estate businesses use to sustain their activities after a natural disaster. The target population included small business leaders in the real estate industry in Louisiana established and implemented business disaster sustainability plans. Resumption of business operations in the wake of any disruption event is critical to business sustainability (Batistella et al., 2017; DaSilva & Trkman, 2014; Phelps, 2014; Sahebjamnia et al., 2015; Torabi et al., 2014). The implications for positive social change include improved sustainability strategies for business leaders to enable them to contribute to community rebuilding and economic development in a postdisaster environment.

Role of the Researcher

The role of the researcher is to collect, organize, and interpret the data and results (Alby & Fatigante, 2014; Lub, 2015). My part as the researcher in this study was to provide participants with an avenue to share experiences and views via interviews and document reviews. I used member checking to validate that the interpretations and meanings formulated express their viewpoints (Alby & Fatigante, 2014; DeMassis & Kotlar, 2014; Leung, 2015;

Yin, 2018). While conducting this study, I acted as the research instrument and used a systematic approach to include data collection and interpretation to reduce bias. This form of data collection was appropriate because it allowed me to gather rich data from the participants (Yardley, 2017). I conducted interviews that consisted of open-ended questions to provide the opportunity to obtain detailed information.

The Belmont Report summarizes the standards for adhering to the rights and protection of human research subjects (National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research [NCPHSBBR], 1979). The Belmont Report contains three acceptable standards for research studies that involve human subjects (NCPHSBBR, 1979). I explained the purpose of the study to participants as well as any possible risks, incentives, penalties, and benefits. I assured the participants that their information will remain confidential and I adhered to the ethical standards for research involving human subjects as defined in the Belmont Report.

I was a small business owner at the time of Hurricane Katrina in 2005. My business was in eastern New Orleans adjacent to Lake Pontchartrain. My family and I evacuated before landfall of the hurricane and returned approximately 7 months later to rebuild. My family and I suffered substantial personal and business property losses. To maintain academic rigor while conducting this research study, personal feelings and experiences did not influence interpretations and analysis of the data to avoid instances of data mismanagement, narrow interpretations of the interview responses, and inadequate study of the information (Alby & Fatigante, 2014; Lub, 2015; Leung, 2015; Yardley, 2017). I

demonstrated sensitivity to context through awareness of how the participants' perspectives and setting influenced their responses (Cronin, 2014; Noble & Smith, 2015; Yardley, 2017).

Participants in the study participated in a 20- to 30-minute interview, reviewed a written transcription of the meeting to confirm accuracy and provided post disaster business continuity planning documentation for researcher review and analysis (Hanson et al., 2011; Heale & Forbes, 2013; Yardley, 2017; Yin, 2018). I conducted the interviews via email, in person or via email, telephone or Skype at the convenience of the participant. I asked participants a standard list of questions and provided the participants the opportunity to ask any questions. I stayed focused on the relevant issues as related to the case study protocol and I was objective in question delivery and response evaluation (Connelly, 2016; Hanson et al., 2011; Leung, 2015; Lub, 2015; Yin, 2018). The interview format allowed the participants to share information that was not be part of the official interview script to enhance the qualitative research study (Hanson et al., 2011; Henry & Foss, 2015). Effective adjustment in the direction of the responses offered by each interviewee facilitated identification of unexpected relevant information (Cronin, 2014; Connelly, 2016; Leung, 2015; Yardley, 2017). Participants reviewed and validated the interview transcripts and document interpretations for accuracy (Hanson et al., 2011; Yardley, 2017).

Participants

Purposeful sampling methods target a population that meets specific criteria established by the researcher to gain a sample of participants in the phenomenon (Leedy & Ormrod, 2013). Researchers use their judgment to select participants based on the study criteria (Leedy & Ormrod, 2013). I emailed the invitation to participate (see

Appendix A) to potential participants and included an explanation of the purpose of this study and the participant informed consent form for participant review (see Appendix B). I recruited using contact information from public contact information on the New Orleans Metropolitan Association of Realtors and New Orleans Chamber of Commerce websites.

Of the first four respondents, the first three business leaders who met participation criteria and indicated consent constituted the multiple cases for this study and precluded bias in selecting cases for this study. Thirteen of the 25 business leaders contacted responded to the request to participate. Selection of three participants was acceptable for this multiple case design as a sample size as small as a single case may have been adequate (Henry & Foss, 2015). I requested that participants who agreed to participate indicate their consent by replying to the e-mail. I interviewed the participants at their convenience. Participation in this qualitative study was voluntary with a protocol of informed consent (Hanson et al., 2011; Leung, 2015; Patton, 2015). I informed the participants that participation was voluntary and that they could withdraw their participation at any time without penalty. No participants withdrew from the study.

After completing the interviews, I transcribed a digital recording of each conversation into a Microsoft Word document. I did not collect any personal identification information from the study participants (Hanson et al., 2011). I e-mailed the complete transcribed interview to each of the participants for their review (Alby & Fatigante, 2014). After receiving responses from the participants, and verification that the transcribed information accurately represented the participants' intent, I uploaded the transcribed participant interviews into the NVivo 10 software program (Baillie, 2015;

Bertolotti & Tagliaventi, 2007). After developing the initial codes, I coded the information using NVivo 12 software to identify emergent themes and relationships (Bertolotti & Tagliaventi, 2007; Savage & McIntosh, 2017).

Research Method and Design

My objective in this qualitative multiple case study was to explore strategies that leaders of small real estate businesses used to sustain their activities after a natural disaster. I chose the qualitative research methodology that uses the multiple case study design. The research design incorporates unique experiences and how those experiences relate to specific events and are particularly relevant for research involving small business management issues (DeMassis & Kotlar, 2014; Henry & Foss, 2015; Noble & Smith, 2015).

Research Method

Qualitative research, quantitative research, and mixed research approaches are the three types of research methods used for rigorous studies, and the relevance of the research method is essential to a valid qualitative study (Cronin, 2014; Cypress, 2017; Yin, 2018). Qualitative research is a design that is exploratory, explanatory, or descriptive through real-world theory application (Cronin, 2014; Yin, 2018). Henry and Foss (2015) maintained that case study research is one of the most useful forms of qualitative research. Cronin (2014) asserted that qualitative research methods are a valuable means to gather facts, gain insights, and understand procedures.

In case study research, a researcher can study real-life settings in an organized and rigorous manner and may use single or multiple case studies, incorporate quantitative

evidence, and rely on various sources of evidence (Connelly, 2016; Cronin, 2014; Sarma, 2015). Qualitative case study researchers attempt to establish a common understanding for the reader by identifying themes, exploring issues, extracting meaning, and answering fundamental questions (DeMassis & Kotlar, 2014). The interview is an invaluable source of case study evidence (Alby & Fatigante, 2014).

Quantitative methods include numerical data and statistical analysis to study correlations between independent and dependent variables (Frels & Onwuegbuzie, 2013; Yin, 2018). The use of a quantitative method measures the results and identifies problems grounded in the data collected, and the researcher is not able to explore issues or extract meaning (Frels & Onwuegbuzie, 2013; Patton, 2015). Quantitative research methods are used to explain or clarify the causal relationship between variables about a phenomenon of interest and are reliant upon measurable knowledge reported numerically (Frels & Onwuegbuzie, 2013; Patton, 2015; Sarma, 2015). The mixed method involves a combination of qualitative and quantitative data in the study (Patton, 2015; Yin, 2018).

Quantitative and mixed approaches were not appropriate for this research study. I selected the qualitative research method for this study because, unlike the quantitative method, the qualitative method allowed for a collection of more accurate data about business strategies that small business leaders used to develop and implement postdisaster business continuity plans. My objective in this study was not to test a theory or hypothesis but to explore strategies that business leaders used to implement effective business continuity plans. This research study did not necessitate cause-and-effect

relationships, statistical evaluations, or comparisons of variables using statistically significant sample sizes.

Research Design

I considered two research designs for the qualitative study of small business postdisaster sustainability planning, which were the phenomenological design and the case study design. Researchers use the phenomenological design to develop conclusions based on the meanings of participants' experiences with a phenomenon (Cypress, 2017; Hanson et al., 2011; Yin, 2018). The phenomenological case study method is the research methodology in which the researcher draws ideas based on applied experience as well as the observations and experiences of the community in which the researcher operates (Hanson et al., 2011; Lub, 2015; Yin, 2018).

The data analysis and evaluation process are participatory processes involving both the researcher and participants (Alby & Fatigante, 2014). Data triangulation using various sources of data collection is vital in the creation of credible qualitative research (Alby & Fatigante, 2014; Ferreira, Buttell, & Ferreira, 2015; Heale & Forbes, 2013). This research study involved participant interviews, member checking, and document reviews. I maintained records of all stages of the research, research records, decisions regarding the data, and my notes for verification and clarity (DeMassis & Kotlar, 2014; Ferreira et al., 2015; Yardley, 2017). I endeavored to establish an unambiguous path for readers to clearly understand how I arrived at conclusions based on the information obtained (DeMassis & Kotlar, 2014). I used a qualitative case study approach with data triangulation because it provided a cost-effective and accurate tool for to explore the

social and economic factors that influenced small business emergence and sustainability in the real estate industry in Louisiana in a postdisaster environment (DeMassis & Kotlar, 2014; Heale & Forbes, 2013; Houghton, Casey, Shaw, & Murphy, 2013).

I invited small business owners to participate via an invitation email sent to small businesses who participate in the real estate industry in Louisiana. The first three small business to respond that met participation criteria constituted the sample population. Small business owners and executive level managers participating in the real estate industry in Louisiana received a participation invitation via email. I selected the first three small businesses to respond, providing that they met the participant criteria for this research study: the organization is a small business as defined by the United States Small Business Administration domiciled in southern Louisiana that offers a service in the real estate industry, other than real estate brokerages, has survived a natural disaster, and has a small business disaster recovery and sustainability plan in place. Participants received the participant informed consent disclosures which clearly described the purpose of the study and participants' rights. The interviews with the small business leaders included open-ended questions and review of company non-confidential business continuity planning documents to understand and analyze their disaster sustainability plans (DeMassis & Kotlar, 2014; Heale & Forbes, 2013; Yardley, 2017). Business documents reviewed included business plan templates, business continuity plan meeting agendas, communication information forms, and general training plans. All documentation was non-proprietary and offered by the participants to enhance the discussion.

The interview is a worthwhile source of case study evidence and should be conducted in a relaxed style and recorded (Alby & Fatigante, 2014; Connelly, 2016; DeMassis & Kotlar, 2014; Lub, 2015; Yin, 2018). I focused on the relevant questions as related to the case study protocol and was objective as possible in question delivery and response evaluation (Connelly, 2016; Hanson et al., 2011; Leung, 2015; Yin, 2018). Two benefits of interviews are that interviews are insightful (DeMassis & Kotlar, 2014; Alby & Fatigante, 2014; Yin, 2018). Interviews also have disadvantages, such as poorly defined questions that can lead to unintended bias by the interviewer or the interviewee (DeMassis & Kotlar, 2014; Alby & Fatigante, 2014). Another potential disadvantage is inaccuracies in the information that may occur if the interviewer does not detail the interview responses appropriately (Cronin, 2014; DeMassis & Kotlar, 2014; Alby & Fatigante, 2014; Leung, 2015; Hanson et al., 2011).

The participants had the opportunity to participate in the interview via email, telephone, or in person at a neutral location selected by the participants. All three participants elected to meet in person. During the interview, I presented a standard list of questions to each participant and answered any participant questions in a comprehensive a manner. The interview process focused on the relevant issues as related to the case study protocol and I was objective in question delivery and response evaluation (DeMassis & Kotlar, 2014; Leung, 2015). I was open to information that the participant wished to provide that was not be part of the official interview script to aid in furthering the qualitative research study (Alby & Fatigante, 2014; Hanson et al., 2011; Henry & Foss, 2015). I was open to valid variances in the direction of the responses offered by

each interviewee to identify unexpected relevant information (Alby & Fatigante, 2014; Cronin, 2014; Connelly, 2016; Leung, 2015; Yardley, 2017).

Using appropriate interview procedures reduced the occurrence of interview weaknesses (Alby & Fatigante, 2014; Cronin, 2014; Connelly, 2016; DeMassis & Kotlar, 2014). Alby and Fatigante (2014) emphasized that a good interviewer is open to the interviewee providing information that may not be part of the official interview script to aid in furthering the qualitative research study. According to DeMassis and Kotlar (2014), the interviewee may provide relevant information for inclusion in future interviews. I was open to a valid variance in the direction of the responses offered by each interviewee to capture unexpected, relevant information (Alby & Fatigante, 2014; Cronin, 2014; Connelly, 2016; Leung, 2015; Yardley, 2017).

DeMassis and Kotlar (2014) promulgated that document review in qualitative research validates and enhances information gathered in interviews and assists in gleaning additional information to address the research question. Developing the foundation of the study, conducting interviews and document reviews, explaining expectations and consent, employing member checking, and creating an atmosphere of professionalism and confidentiality ensured the internal validity of the study (Cronin, 2014; DeMassis & Kotlar, 2014; Leung, 2015; Yardley, 2017; Yin, 2018). Professional interviews with small business leaders and small business document reviews allowed for the collection of information regarding leadership strategies, management strategies, capital financing, legal and regulatory requirements, customer engagement, and other factors that contributed to small business sustainability (DeMassis & Kotlar, 2014; Hsu et

al., 2017; Ibrahim, Abdullah, & Ismail, 2016; Josephson & Marshall, 2016). The study participants had the opportunity to review the interview transcripts and data derived from documents to verify and confirm the validity of the interpretations to ensure that there are no distortions or misconstrued responses. A transcription of each interview, as well as any document review notes, was provided to each study participant within one week of the interview, (via email or in person, at the convenience of the participant), for review and verification with the request that I receive a response via email within one week.

Transcripts of all interviews, as well as information gleaned from document reviews, was retained (Cronin, 2014; DeMassis & Kotlar, 2014; Noble & Smith, 2015). I cataloged, categorized and prioritized interview transcripts and document review data for accuracy and relevancy (Branthwaite & Patterson, 2011; Cronin, 2014; Cypress, 2017). I developed significant trends and implications from the data and compiled interpretations of the preliminary findings (Baillie, 2015; DeMassis & Kotlar, 2014; Noble & Smith, 2015). Research participants received the preliminary data interpretations, and they had the opportunity to verify or clarify the transcribed interviews and document review data (DeMassis & Kotlar, 2014; Leung, 2015; Yardley, 2017). Based on participant feedback, I altered and re-developed the interpretations and used the latest data to produce a final data analysis that the research participants endorsed (DeMassis & Kotlar, 2014; Heale & Forbes, 2013; Leung, 2015). Finally, I developed a final compilation of the research findings (Baillie, 2015; Heale & Forbes, 2013; Yardley, 2017).

The compiled research data facilitated identification of small business postdisaster sustainability planning strategies used by business leaders to re-establish operations after

a disaster. Member checking allowed for validation of data and maintenance of accurate records for all stages of the data collection and analysis. The data was derived from semistructured interviews, review, and analysis of postdisaster sustainability plans and associated documentation, transcript review, and member-checking to strengthen credibility and trustworthiness.

Population and Sampling

This multiple case study analysis included a theoretical sampling approach. According to DeMassis & Kotlar (2014), researchers should select cases because they are suitable and relevant to address the phenomenon under investigation. This study involved purposeful sampling. Purposeful sampling methods employ a population that meets specific criteria established by the researcher from which the researcher obtains a sample of participants in the phenomenon (Leedy & Ormrod, 2013). Small business owners and executive level managers participating in the real estate industry in Louisiana received a participation invitation via email. I selected the first three small businesses that responded that met the participant criteria for this research study: the organization is a small business as defined by the United States Small Business Administration domiciled in Southern Louisiana that offers a service in the real estate industry, other than real estate brokerages, has survived a natural disaster, and has a small business disaster recovery and sustainability plan in place.

Ethical Research

The treatment of research participants is of utmost importance in all research (Mitchell & Wellings, 2013). I applied for approval from the Walden University

Institutional Review Board before commencing the data collection process and did not contact potential participants until I received their approval. To remain ethical with the completion of the research, I emailed the participant informed consent form (see Appendix B) for each participant to read and acknowledge (see Appendix B). Also included in the email was additional information, including a summary of the nature of the study, so that the small business manager was well informed. The consent form indicated that participation was 100% voluntary and that, if at any time and for any reason the participant wanted to withdraw from the study, they only needed to notify me in writing to be excluded with no obligation to the researcher or Walden University. No participants withdrew from the study. The participants did not receive any form of compensation or incentive whatsoever for participation.

To ensure that participants ethical protection of the participants, I assigned each participant a number (i.e., Participant 1, Participant 2, etc.) to maintain the confidentiality of the business or individual small business representative. I provided a signed confidentiality agreement to all participants to state that all documentation provided by the participants will remain secured in a locked filing cabinet for 5 years. Only the researcher will have access to the participant's specific identifying information, and, after five years, the documentation will be destroyed (Mitchell & Wellings, 2013). The study did not include the names of individuals or businesses who participated in the study.

Data Collection Instruments

I was the data gathering instrument in the semistructured interviews and the review of company business continuity planning documents that validated and enhanced

the interview data. Because the researcher was the data gathering instrument, the researcher exercised sensitivity and applied knowledge and skills to produce reliable and valid data (Alby & Fatigante, 2014). I conducted interviews, document reviews, and member checking for three small business owners or senior level executives in the real estate industry located in Louisiana. I only reviewed business continuity planning documents that were not confidential or proprietary. The business leaders allowed me to review business plan formats, past business planning meeting agendas, sample project plans, and training plans. The leaders only shared what was readily available during the meeting. Two of the business leaders contacted me prior to the interview to inquire regarding preparations for the interview and brought some documentation to the interview for my perusal. Another participant shared what he felt was appropriate and what was readily accessible on his smartphone and laptop.

I collected data through semistructured interviews that included open-ended questions. I met with small business leaders and owners who had the authority to discuss sustainability operations voluntarily. No confidential or proprietary information was requested or required for this study. A requirement for participation was the business leaders' willingness to discuss non-sensitive relevant company documents, such as written business continuity plans. Semistructured interviews involved the use of pre-established, open-ended questions that allowed for guidance and consistency (DeMassis & Kotlar, 2014). Interviews with small business leaders allowed for the collection of information regarding small business postdisaster sustainability planning via information obtained during interviews and review of relevant documentation. The semistructured

interview enabled the participant to provide additional information and allowed the interviewer to gain more in-depth knowledge for an intensive and productive discussion while document reviews enhanced the information gleaned from the interview (Alby & Fatigante, 2014; Bertolotti & Tagliaventi, 2007; DeMassis & Kotlar, 2014).

Data Collection Technique

The researcher served as the data collection instrument in this qualitative research study (Leedy & Ormrod, 2013). The data collection process for this research study involved participant interviews, member checking, document reviews and rigorous record keeping ensured the collection of accurate and valid data. Interviews are often the primary source of data in case studies (DeMassis & Kotlar, 2014). I contacted 25 potential participants using a standard invitation to the participants (see Appendix A) emailed using publicly available email contact information.

The New Orleans Chamber of Commerce and the New Orleans Metropolitan Association of Realtors have a membership directory and an affiliate business website, respectively, that provide business contact information that is accessible by the public to promote these businesses. According to both organizations' websites, the organizations pay a fee to have the information made publicly available for advertising purposes and marketing purposes. The NOMAR affiliate directory may be accessed at <http://www.nomar.org/real-estate-related-services-buyers-and-sellers-menu.html> and the New Orleans Chamber of Commerce Directory may be accessed at <http://www.neworleanschamber.org/list/ql/real-estate-moving-storage-20>. I specifically excluded Real Estate Brokerages in my research, therefore, I sorted through the list to

select companies that provided real estate services other than brokerage service and who have posted direct email contact addresses as a means of contact on the site or via the companies linked webpage. I started with the public contact information available on NOMAR (serves all parishes in Southeastern Louisiana) and the New Orleans Chamber of Commerce (serves businesses in the Greater New Orleans Metropolitan area which includes is a large portion of Southeastern Louisiana). I identified those businesses that readily provide business leader contact information (business owner or senior business leaders).

The invitation to participate (see Appendix A) was emailed to twenty-five potential participants and included an explanation of the purpose of this study and the participant informed consent form for participant review (see Appendix B). I recruited using contact information from public contact information on the New Orleans Metropolitan Association of Realtors and New Orleans Chamber of Commerce websites. I accepted as participants the first three respondents that met the participant criteria and indicated a willingness to participate. Of the first four respondents, the first three business leaders that met participation criteria and indicated consent constituted the multiple cases for this study and precluded bias in selecting cases for this study. Thirteen of the twenty-five business leaders contacted responded to the request to participate. Selection of three participants was acceptable for this multiple case design as a sample size as small as a single case may have been adequate (Henry & Foss, 2015). I requested that participants who agreed to participate indicate their consent by replying to the e-mail. I interviewed the participants at their convenience. Participation in this qualitative study was voluntary

with a protocol of informed consent (Hanson et al., 2011; Leung, 2015; Patton, 2015). I informed the participants that their participation was voluntary and that they could withdraw their participation at any time without penalty. No participants withdrew from the study.

After completing the interviews, I manually transcribed a digital recording of each conversation from my Samsung mobile device into a Microsoft Word document. I did not collect any personal identification information from the study participants (Hanson et al., 2011). I e-mailed the complete transcribed interview to each of the participants for their review (Alby & Fatigante, 2014). After receiving responses from the participants, and verification that the transcribed information accurately represented the participants' intent, I uploaded the transcribed participant interviews into the NVivo 10 software program (Baillie, 2015; Bertolotti & Tagliaventi, 2007). After developing the initial codes, I coded the information using NVivo 12 software to identify emergent themes and relationships (Bertolotti & Tagliaventi, 2007; Savage & McIntosh, 2017).

The researcher served as the data collection instrument in this qualitative research study (Leedy & Ormrod, 2013). The data collection process for this research study involved participant interviews, member checking, document reviews and rigorous record keeping ensured the collection of accurate and valid data. Interviews are often the primary source of data in case studies (DeMassis & Kotlar, 2014). I contacted 25 potential participants using a standard invitation to the participants (see Appendix A) emailed using publicly available email contact information. The New Orleans Chamber of Commerce and the New Orleans Metropolitan Association of Realtors have a

membership directory and an affiliate business website, respectively, that provide business contact information that is accessible by the public to promote these businesses. According to both organizations' websites, the organizations pay a fee to have the information made publicly available for advertising purposes and marketing purposes. The NOMAR affiliate directory may be accessed at <http://www.nomar.org/real-estate-related-services-buyers-and-sellers-menu.html> and the New Orleans Chamber of Commerce Directory may be accessed at <http://www.neworleanschamber.org/list/ql/real-estate-moving-storage-20>

The interview process provided direction to the study and simultaneously permitted participants to express their opinions freely and voluntarily (Alby & Fatigante, 2014; Bertolotti & Tagliaventi, 2007; DeMassis & Kotlar, 2014). Participants received the Participant Consent Form included with the email (see Appendix B). The participants indicated consent by replying to the email with consent. No identifying information was recorded. I assigned identifiers to the participants, i.e. participant 1, 2, or 3. I conducted the interviews at locations convenient to the participants and involved open-ended questions per the interview protocol provided in Appendix C. The interview with Participant 1 was conducted at a coffee shop, the interview with Participant 2 was conducted at a café, and the interview with Participant three was conducted at a public library. I recorded the interviews with a portable recording device, my mobile phone. I was familiar with the recording features of my Samsung smartphone and had used it to record meetings at various times in my career. The participant identifier and location of the interview was recorded at the start of the interview in the same recording as the interview.

I manually transcribed the data and developed data interpretation into Microsoft Word and subsequently uploaded into NVivo 12 for coding and identification of themes. I provided a transcription of each interview, as well as business continuity plan documentation analyses, and my interpretation of the information to the appropriate study participant within 48 hours of the interview for review and verification with the request that I receive a response via email within one week. All participants responded promptly to confirm the accuracy of the transcriptions and that the researcher's interpretation of the responses for inclusion in the research study accurately reflected the participants' intended responses.

I manually transcribed each interview into Microsoft Word, developed interpretations of the data and information gleaned from business continuity planning documents reviewed with the participants, and provided the information along with my interpretation of the information to the participants within 48 hours of each interview. The longest response time from participants was three days. The participants did not request revisions. All participants confirmed that the transcriptions, information gleaned from the documentation reviews, and researcher interpretation adequately represented the participant responses as intended. I maintained accurate records for confirmation and repeatability of the results to ensure accuracy and validity.

Data Organization Technique

I maintained interview data on a data storage drive to maintain its integrity. This data included interview recordings, transcribed interview transcripts, interview notes, audio recordings, and document review notes (Noble & Smith, 2015; Savage &

McIntosh, 2017; Yardley, 2017). Data organization included maintaining a separate record for each participant's response, document review data, and any relevant observation notes. The files are labeled in electronic form to maintain the integrity of the information gathered. The labels will be used containing a participant number (participant 1, 2, 3) for each company. These data organization techniques facilitate identification of themes, patterns, trends, and main topics (DeMassis & Kotlar, 2014; Leedy & Ormrod, 2013; Noble & Smith, 2015). Research data, including interview notes, audio recordings, interview transcripts, document review notes, and observation notes will be kept on a USB storage device in a locked file cabinet in my residence for 5 years after which time I may destroy all documentation via a secure document disposal company.

Data Analysis

Complex systems adapt to current circumstances by gathering necessary information and the environment which causes the complex behavior to occur. The organization's leaders gain experience because of the events that require the management to reorganize in response (Ozturk & Kizilkaya, 2017). Chaos theorists facilitate an understanding of how systems self-organize to adapt to continuing challenges to overcome chaos while the stakeholder theory facilitates an understanding of the strategic direction, the strategic program formulation, budgeting, control and structure, and systems necessary for strategic management (Faggini & Parziale, 2016; Freeman, 2010; Hillman & Keim, 2001). The principles of the chaos theory and the stakeholder theory framed the basis for the data collection and analysis process for this research study.

The data collection process employed participant interviews, member checking, and document reviews that ensured data saturation and reliability (Heale & Forbes, 2013; Yin, 2018). The data analysis and evaluation stage of the process was a participatory process that involved both the researcher and participants (Branthwaite & Patterson, 2011; Cypress, 2017; Yin, 2018). I reviewed the interview transcripts and notes of all interviews as well as information gleaned from document reviews. I cataloged, categorized, and prioritized the interview transcripts and document review data for accuracy and relevancy (Branthwaite & Patterson, 2011; Cronin, 2014; Cypress, 2017).

I developed significant trends and implications from the data and compiled preliminary findings and interpretations. I presented the preliminary data interpretations to the research participants. The research participants verified or clarified the transcribed interviews and document review data (DeMassis & Kotlar, 2014; Leung, 2015).

I used an open coding process in the analysis of the transcribed interviews (Baillie, 2015; Bertolotti & Tagliaventi, 2007). Coding was a significant step of the data analysis to organize and make sense of documented data and required the analyst to read the information and define sections (Bertolotti & Tagliaventi, 2007). Researchers use coding to organize and make sense of documented data (Baillie, 2015; Savage & McIntosh, 2017). Most coding requires the analyst to read the information and define sections and involves identifying the segments of information with symbols, descriptive words, or category labels (Baillie, 2015; Ibrahim et al., 2016).

I considered two software tools for data analysis. I had used Microsoft Word, Atlas.ti and NVivo 12 in previous research. NVivo 12 is more user-friendly and enabled

me to transcribe the interview data, document observations, and conduct document analysis to identify themes and trends for this case study research. I used NVivo 12 software to extract words from the interview transcripts and count the number of times the words recurred in the document to categorize respondent answers to the interview questions to identify keywords relevant to the research process and keywords considered irrelevant (Baillie, 2015; Bertolotti & Tagliaventi, 2007). The words extracted and sorted provided a definitive keyword list to determine factors that affected the resiliency of the small real estate businesses in the aftermath of a natural disaster data (Baillie, 2015; Bertolotti & Tagliaventi, 2007; Savage & McIntosh, 2017).

I maximized opportunities for meaningful interpretations and eliminated researcher expectations to avoid theoretically focused coding to circumvent in a misrepresentation of the findings (Hanson et al., 2011; Noble & Smith, 2015). The discussion ensured reliability and validity of the researcher's interpretations with the participants intended responses for clarification and validation of data interpretation (Cypress, 2017). Next, I altered and re-developed the interpretations as needed and used the latest data to produce a final data analysis that the research participants endorsed (DeMassis & Kotlar, 2014; Heale & Forbes, 2013; Leung, 2015). Last, I created a final compilation of the research findings (Heale & Forbes, 2013).

Reliability and Validity

Designing and incorporating methodological strategies to ensure reliability and validity of the findings and to evaluate that the quality of research is essential to facilitate practical use of the research findings (Connelly, 2016; Cypress, 2017; DeMassis &

Kotlar, 2014; Leung, 2015; Noble & Smith, 2015; Venkatesh et al., 2016). I ensured the quality and reliability of the information obtained for this study by conducting professional interviews, member checking, and performing document reviews with small business leaders in the Louisiana region that are prototypical of the small businesses that established or resumed operations after Hurricane Katrina (Cypress, 2017; Leung, 2015; Cypress, 2017; Heale & Forbes, 2013; Noble & Smith, 2015). The target audiences for the research finding was small business leaders in the real estate industry in the Louisiana Gulf Coast region.

Qualitative researchers aim to design and incorporate methodological strategies to ensure reliability and validity of the findings and to evaluate the quality of research necessary to facilitate practical use of the research findings (Cronin, 2014; Heale & Forbes, 2013; Leung, 2015; Noble & Smith, 2015; Venkatesh et al., 2016). The relationship between reliability and validity was essential in guiding the research process and the development of the study and received significant consideration during the design of the study and was maintained throughout the process of results analyses and quality of the research (Connelly, 2016; Cronin, 2014; Cypress, 2017; Heale & Forbes, 2013; Leung, 2015; Noble & Smith, 2015).

Reliability

Reliability requires the researcher to make judgments about the trustworthiness of the research, the application and appropriateness of the methods undertaken, and the integrity of the conclusions (Cypress, 2017; Leung, 2015; Noble & Smith, 2015). To ensure that the data are reliable, I documented the data utilizing consistent data collection

methods throughout this study (Heale & Forbes, 2013; Venkatesh et al., 2016). In conducting this research, I avoided the use of biased or leading questions (Leung, 2015; Noble & Smith, 2015; Yardley, 2017). The results are not universal to companies not participating in the research but are exemplary of companies of similar size and circumstance (Baillie, 2015; Ibrahim et al., 2016; Leung, 2015). Eliminating personal or perceived biases that could negatively influence the research process was of paramount importance in this study (Leung, 2015; Noble & Smith, 2015; Yardley, 2017).

Data analysis included data coding to organize and make sense of documented data and required the analyst to read the information and define sections (Baillie, 2015; Bertolotti & Tagliaventi, 2007; Savage & McIntosh, 2017). The research involved an open coding process to analyze transcribed interviews, small business documentation, and NVivo 12 software to categorize the respondent data and identify keywords and trends and to maintain an audit trail of data collected and analyzed (Baillie, 2015; Bertolotti & Tagliaventi, 2007; Houghton et al., 2013). I made a conscious effort to minimize any conceptual bias and the impact of previous research on the data coding and analysis processes (Baillie, 2015; Ibrahim et al., 2016; Leung, 2015; Noble & Smith, 2015). I provided the participants the opportunity to verify the transcribed interviews and document review data and the prospects for meaningful development and verification of interpretations to eliminate researcher expectations to avoid theoretically focused coding to eliminate misrepresentation of the findings (Heale & Forbes, 2013; Leung, 2015; Noble & Smith, 2015).

Validity

Validity in qualitative research refers to the suitability of the tools, processes, and data (Cypress, 2017; Leung, 2015; Noble & Smith, 2015). The various methods to conduct reliable and valid qualitative research increase the difficulty in constructing a universally accepted path regarding the validation of qualitative research (Lub, 2015; Noble & Smith, 2015; Yardley, 2017). Interviews, documents reviews, and member checking are used in case studies to support and enhance information gathered (Lub, 2015; Sarma, 2015; Venkatesh et al., 2016). One advantage offered by qualitative research is that it can examine and theorize contextual effects and the criteria for proper qualitative research are intended to be extremely flexible (Lub, 2015; Venkatesh et al., 2016; Yardley, 2017).

Credibility

The research was qualitative, and the results are intended to be generalizable from the study sample to the target population (Cypress, 2017; Leung, 2015; Noble & Smith, 2015). The appropriateness of the method and the research question are of paramount concern about validity and suitability (Cypress, 2017; Lub, 2015; Leung, 2015; Yardley, 2017). Via member checking, the study participants reviewed the interview transcripts and data derived from documents to verify and confirm the validity of the interpretations to ensure that there are no distortions or misconstrued responses (Baillie, 2015; Hanson et al., 2011; Heale & Forbes, 2013; Lub, 2015). According to Baillie (2015), member checking is the process researchers employ to allow research participants to review transcripts to validate that what they said accurately represents their intent. Lub (2015) defined member checking as the systematic feedback obtained from participants

regarding the data collected, interpretations, and conclusions of the research study to ensure the credibility of the researcher's study. Member checking is vital to minimize the risk of misinterpretation to establish research credibility (Baillie, 2015; Connelly, 2016; Lub, 2015). Developing the foundation of the study, conducting interviews and document reviews, explaining expectations and consent, employing member checking, and creating an atmosphere of professionalism and confidentiality ensured the internal validity of this study (Connelly, 2016; Cypress, 2017; Heale & Forbes, 2013; Leung, 2015; Noble & Smith, 2015; Venkatesh et al., 2016).

Confirmability

I recorded, transcribed, and reviewed participant interviews and document reviews for accuracy (Heale & Forbes, 2013; Noble & Smith, 2015; Yardley, 2017). Participants reviewed the information collected for accuracy to avoid the possibility of misinterpretation (Leung, 2015). Copies of data from document reviews have been maintained to substantiate findings (Heale & Forbes, 2013; Venkatesh et al., 2016). I provided a written consent form to study participants and retained detailed notes of information gleaned from interviews and document reviews and reassured the small business leaders of confidentiality and professionalism in reviewing the company specific documents (Heale & Forbes, 2013; Lub, 2015; Noble & Smith, 2015; Yardley, 2017). Yardley (2017) asserted that the qualitative analysis must show sensitivity to the data by carefully considering the intended meanings of the participants, and the data interpretations must be transparent.

Transferability

According to Lub (2015), the research findings should facilitate transferability with a detailed description of the context, location, participants, and analysis of the study results. Different perspectives could influence both what participants say and the researcher's interpretation (Leung, 2015; Lub, 2015; Yardley, 2017). A qualitative study should demonstrate sensitivity to context by showing awareness of the participants' perspectives and setting (Yardley, 2017). This research was qualitative, and the results are intended to be generalizable from the study sample to the target population (Leung, 2015). By using the technique of member checking, the study participants had the opportunity to review the interview transcripts and data derived from documents to verify and confirm the validity of the interpretations to ensure that there were no distortions or misconstrued responses (Alby & Fatigante, 2014; Hanson et al., 2011).

Transition and Summary

In Section 2, I outlined the research method, design, and theory of this qualitative research study in detail. In this section, I described the participant selection process and my role as the researcher. Furthermore, the section included a review of data collection procedures, data organization techniques, and data analysis techniques. The reliability methods and validity of the research concluded Section 2.

In Section 3, I describe the research results of the study. I include an overview of the study, present the findings, address how to apply the results to professional practice, and the implications for social change. I conclude with recommendations for action, further study suggestions, and reflections.

Section 3: Application to Professional Practice and Implications for Change

Introduction

My purpose in this qualitative multiple case study was to explore strategies that leaders of small real estate businesses in southeastern Louisiana use to sustain operations after a natural disaster. The study population consisted of leaders of small companies in the real estate industry in southeastern Louisiana who have survived a natural disaster and have developed and implemented disaster sustainability plans. Profit-generating small business enterprises are significant contributors to economic growth and development, yet 40% to 60% of small businesses in the United States that experience a natural disaster never reopen after that natural disaster (Federal Emergency Management Agency, 2018).

postdisaster sustainability planning enables small business owners to identify key recovery systems (McKnight & Linnenluecke, 2016). Business continuity planning may expedite the resumption of services in the event of a disaster (McKnight & Linnenluecke, 2016). This study was significant because I sought to identify strategies that small business leaders use to increase the small business community's ability to efficiently and expeditiously re-establish commerce, particularly in the real estate industry, after large-scale natural disasters.

The principal research question guiding this study was: What are the strategies that small business real estate leaders use to sustain their businesses after a natural disaster? I conducted semistructured interviews with three small business leaders and used methodological triangulation of data, which included the interview data and data

from reviews non-confidential or proprietary business continuity planning documents such as business plan templates, business planning meeting agendas, general training plans, and communication information sheets.

The analysis of participant interview responses and evaluation of business continuity planning documentation as related to the research question, conceptual framework, and literature review indicated that the participants believe that education and abilities, stakeholder engagement, planning and critical processes, and disaster response business planning are essential to business continuity planning. Data saturation helped to enhance the trustworthiness and validity of the study (Daher et al., 2017). Data saturation means the interviewer collected data from interviews and documents to the point where no new information emerged (Bernard et al., 2016). I interviewed and reviewed the participant provided business planning documentation until the data were saturated and became repetitive after the three interviews, with no further information or themes appearing. I used member checking for verification.

The participants displayed a high degree of personal accountability and motivation, and a strong commitment to rebuilding. All participants indicated that stakeholder engagement prior to and during recovery from a disaster is integral to effective and expedient post disaster recovery. The data that I gleaned from the interviews and documentation supported this assertion. All three participants had an established process for maintaining contact with key stakeholders before, during and after a disaster. All agreed that planning is imperative to maintain order in the chaotic aftermath of the disaster.

All participants participated in the real estate industry and provided services essential to economic community recovery. P1 provided real estate rental management services, P2 provided real estate insurance and mortgage services, and P3 provided construction services. All participants acknowledge that the services they provided were instrumental in rebuilding the infrastructure in the affected region and to the effective re-establishment of commerce. The participants stressed the importance of stakeholder engagement, business continuity training and certifications, defined organizational processes, retention of experienced personnel, cross training, and technical competencies.

I used NVivo 12 Plus for data analysis and based on the chaos theory, the stakeholder theory, and literature reviews. Four main themes emerged that related to the strategies used to sustain a business. These themes were (a) education and abilities, (b) stakeholder engagement, (c) planning and critical processes, and (d) disaster response.

Presentation of the Findings

The research question guiding this study was: What are the strategies that small business real estate leaders use to sustain their businesses after a natural disaster? The qualitative case study design included data from two sources. The primary source of data was the interviews with leaders from three small real estate businesses in southeastern Louisiana. I also reviewed documents related to the participants' disaster continuity planning. The study sample for this qualitative multiple case study consisted of leaders from three small businesses in the real estate industry in Louisiana. I used aliases (e.g., Participant 1, Participant 2) to preserve the confidentiality of the participants. Relevant

demographic data from the small business owners who survived the adverse effects of a natural catastrophe appear in Table 2.

Table 2

Participant Information

	Position or title	Location	Type of disaster	Years in operation
Participant 1	Owner	Louisiana	Hurricane	21
Participant 2	Owner	Louisiana	Hurricane/flood	35
Participant 3	Owner	Louisiana	Hurricane/flood	15

The nine semistructured questions that I developed and included in the interview protocol included the same nine items offered to every participant. The analysis involved reading the verbatim transcriptions of interview data and document review notes to understand the participants' postdisaster sustainability plans better. The interviews, documents, and member checking identified effective business continuity strategies that the small business leaders used for the resumption of business operations after a natural disaster. My review of peer-reviewed journals served to link the research question with the conceptual framework to provide a reliable source of secondary data (Booth, Sutton, & Papaioannou, 2016).

This case study design uses interview data collection, which allows an enhanced understanding of disaster recovery, the participant experiences, and their planning strategies (Dasgupta, 2015). In the semistructured interviews, the participants responded to the nine standard interview questions which provided an in-depth understanding of how business leaders of small real estate firms in southeastern Louisiana resumed and

maintained operations in the aftermath of a large-scale natural disaster. I used an interview protocol described in Appendix A and member checking to mitigate bias and increase validity (Bernard, Wutich, & Ryan, 2016).

I used methodological triangulation focused on interviews with participants, member checking and document reviews to promote validity and reliability in the process of data analysis (Daher, Carre, Jaramillo, Olivares, & Tomicic, 2017). I evaluated each participant's response to each interview question separately and coded it for recurring themes. Next, I conducted a second analysis using all the participant responses combined. The significant ideas from the two reviews were the same. The major themes were (a) education and abilities (b) stakeholder engagement, (c) planning and critical processes, and (d) disaster response. The themes highlighted strategies used by small real estate business owners in southeastern Louisiana to sustain their business after a major natural disaster and facilitated identification of eight strategic components of postdisaster recovery and sustainability plans as depicted in Table 3. In the following sections, I discuss significant elements of the study.

Table 3

Strategic Components

Strategic component	P1	P2	P3	<i>N</i>	Emergent theme
Skills	3	17	18	38	a
Training	3	13	18	34	a
Stakeholders	12	17	24	53	b
Community	9	16	15	40	b
Development and implementation	25	23	30	77	c
Review and revision	3	8	10	21	c
Business impact analysis	21	27	20	68	d
Documentation (agreements, plans, insurances)	11	9	8	29	d

Emergent Theme 1: Education and Abilities

Skills. The leaders possessed the ability and skills to innovatively and effectively respond to a major disaster and effectively re-entered commerce and subsequently expand operations. The small business owners embraced business continuity and sustainability planning and maintained strategic focus in the chaotic aftermath of a large-scale natural disaster and subsequent small business interruptions. All companies had formal business continuity plans in place and kept minutes of business continuity planning meetings. The strategies varied in the format as they were specific to each company. However, all the plans included a communication protocol, identification of key personnel, identification of critical processes, and a business impact analysis.

Barrett (2015) emphasized that education and training is a fundamental component necessary for entrepreneurs to have viable, sustainable ventures and to increase the ability to lead the organization through an unplanned interruption. Effective strategic planning processes are essential for managers to overcome business disruptions and maintain long-term sustainability. Bischak and Woiceshyn (2015) asserted that small business leaders must have the necessary skills to perform a full range of managerial functions to be successful and invest in skills training for employees. Access to capital is an integral component of small business success according to Xiang and Worthington (2015). Wamba, Hikkerova, Sahut, and Braune, (2017) found that small business owners with advanced levels of education and training experienced an increase in access to traditional debt and investment funding opportunities.

My research findings reaffirmed that management education and skills are a critical component of effective postdisaster recovery planning. Restricted access to financing was a constraint to the resumption of operations and sustainability. Financial literacy and access to funds are necessary for small business sustainability. Business managers need to understand financial options for small businesses as well as the loan processes, documentation requirements, and credit scoring processes. Interview data and data gleaned from the BCP templates and meeting agenda indicated that included a business impact analysis component.

P1 had advanced education in business administration, business impact analysis, and computer information systems. The business owner had operated as a financial operations manager of a large corporate firm in the area before starting the company. P2's business was very technologically dependent and required a skilled and talented staff. P2's spouse and partner had previously worked in a for a local government agency in an accounting manager. The company has a dedicated business continuity manager who conducted regularly scheduled business disaster training sessions. According to P2, "Our disaster plan is based off years of experience evaluating and recovering."

P3 had advanced levels of education in management and finance, another organization partner had more than 20 years' experience in construction, and the other partner was an experienced project manager with over ten years of corporate experience. One of the key management personnel in P3's organization was a certified project manager and had previous experience with business continuity planning. P3 was a construction company and used a business continuity plan based on a project

management template. P3 considered their continuity plan the most vital asset in during recovery because it provided structure and a clear path for a company that was very dependent on customers and suppliers. In concurrence with research conducted by Sahebjamnia, Torabi, and Mansouri (2018) and Rossmiller, Lawrence, Clouse, and Looney (2017), these research findings indicate that small business owners must develop postdisaster recovery plans for timely resumption of operations of operations after a natural disaster to increase the likelihood of long-term sustainability after a natural disaster.

Training. Ferro, Padin, Svensson, Varela, Wagner, and Høgevoid (2017) promulgated that effective small business leaders must continuously develop skills to implement business continuity plans. Each of the participants had significant relevant education and experience with business operations and planning and had formal training plans in place for themselves and their employees. The leaders were proponents of improved business performance and sustainability through continuous investment in skills training. My research indicates that managers with the appropriate skills, training, and education lead and motivate employees as well as make informed strategic operating and planning decisions. Employee skills and training contributed to improved small businesses performance and supplemented the small business leader's expertise, which emphasizes the importance of employees' skills training in the small business skill development and training is a critical component of small business postdisaster sustainability.

All three participants identified a formal, organizational training plan. The training plans differed in extensiveness, P1's plan was more exhaustive than P2's strategy, and P3's program was the most comprehensive of all. However, all three participants required that employees hired with specific certifications and skills maintain the relevant certifications and abilities and provide annual verification of compliance. Each of the participants acknowledged that the related skills of themselves and their employees were necessary, and all were proponents of continuous training. Each of the organizations had business continuity plans in place and had identified a specific individual responsible for business continuity planning for their organization. As P1 indicated, ". . . be ready to respond quickly with appropriate processes and documentation . . . stay up to date on the most recent trends and technologies available to enable us to restore operations as soon as possible . . . be proactive, stay informed, keep up to date on training opportunities for all of us, top to bottom, bottom to top."

Each of the participants acknowledged the relevant skills of themselves and their employees and were proponents of continuous training. Each of the organizations had business continuity plans in place and had identified a specific individual responsible for business continuity planning for their organization. P1 had advanced education in business administration, business impact analysis, and computer information systems. The business owner had operated as a financial operations manager of a large corporate firm in the area before starting the company. P2's business was technologically dependent and required a skilled and talented staff. P2's spouse and business partner had previously worked in a for a local government agency in an accounting manager. The

company has a dedicated business continuity manager, and c conducted business disaster training sessions regularly. According to P2, “Our disaster plan is based off years of experience evaluating and recovering.”

P3 had advanced levels of education in management and finance, another organization partner had more than 20 years’ experience in construction, and the other partner was an experienced project manager with more than 10 years of corporate experience. One of the key management personnel in P3’s organization was a certified project manager and had previous experience with business continuity planning. P3 was a construction company and used a business continuity plan based on a project management template. P3 considered their continuity plan the most vital asset in during recovery because it provided structure and a clear path for a company that was dependent on customers and suppliers. In concurrence with research conducted by Sahebjamnia, Torabi, and Mansouri (2018) and Rossmiller, Lawrence, Clouse, and Looney (2017), these research findings indicate that small business owners must develop postdisaster recovery plans for timely resumption of operations of operations after a natural disaster to increase the likelihood of long-term sustainability after a natural disaster.

Table 4

Strategic Components of Emergent Theme 1: Education and Abilities

Strategic component	P1	P2	P3	N
Skills	3	17	18	38
Training	3	13	18	34

Emergent Theme 2: Stakeholder Engagement

According to Marin, Bodin, Gelcich, and Crona (2015), natural disasters have an economic impact on the affected communities, and the uncertainty aftermath of Hurricane Katrina illustrated how the affected systems created order from chaos. Patankar and Patwardhan, (2016) asserted that small businesses operate within a complex social system which must be understood to fully grasp the extent of the small business' economic environment. According to Linnerooth-Bayer and Hochrainer-Stigler (2015), in the aftermath of the large-scale natural disaster, it is essential to understand the factors that influenced re-investment. Marshall and Schrank (2014) found that disaster recovery at the federal level begins with the presidential declaration of disaster, community stakeholders must lay the groundwork for improvement prior to a disruption because the various economic, financial, social, human, and educational factors that exist at the time of the disaster influence the resilience of every entity affected.

Stakeholders. According to Ferro, Padin, Svensson, Varela, Wagner, and Høgevoid (2017), small business leaders must proactively engage in stakeholders to resume and maintain operations and sustainability. Madsen and Rodgers (2015) emphasize that a planned response promotes stakeholder confidence. Rogers (2016) stated that governments, community organizations, owners, consumer advocates, suppliers, customers, competitors, and employees are stakeholders in the business and business managers engage with disaster-affected communities through their stakeholder relationships. After the disaster, the participant business leaders actively engaged stakeholder to facilitate sustainable disaster recovery processes and used all available

tools to redevelop old real estate and revitalize neighborhoods. The participants expressed that recovery was a partnership effort between the small business and community stakeholders. P2 and P3 emphasized how crucial it was to communicate with other small businesses in the area that were part of their industry as well as community leaders and local officials. P1 indicated that it was imperative that he reassure his investors of the feasibility of rebuilding. His management team stayed in constant communication with government officials regarding infrastructure improvements, repopulation trends, and other relevant issues while simultaneously filing insurance claims, arranging for contractors and responding to clients. All three exhibited formal communication processes to identify and maintain communication key stakeholders as part of normal operations and in the event of a natural disaster.

Community. Consistent with the findings of Inigo, Albareda, and Ritala, (2017), business continuity planning strategies that the small real estate businesses leaders used to respond to the unplanned business disruptions and maintain sustainability after a natural disaster contributed to community recovery initiatives. Successful postdisaster planning helped the small business leaders coordinate efforts with community leaders, housing industry professionals, and disaster recovery officials to understand, visualize, coordinate, and effectively manage postdisaster concerns to increase community resilience. All participants indicated that one of the most critical aspects of recovery was maintaining a strong relationship with stakeholders, including employees, government officials, clients, partners, and suppliers.

P1 operated a very client-focused business and understood this in the aftermath of the catastrophe and the emphasis on staff was to accommodate and assist tenants in whatever manner possible. P1 worked with government officials to identify housing assistance and temporary shelter for displaced tenants. Without the trust of his customers and the support of community leaders, he would have faced a much more difficult time to recovery of operations.

Participant 2 emphasized that organizational leader's preserved contact with clients, colleagues, and city officials consistently throughout the disaster event and reconstruction period. P2 stressed that the strong relationships he had established with clients, customers and community leaders availed him of critical information and resources to expedite recovery. P2 stated, "A lot of our recovery was because of relationships with other businesses. We helped them, and they helped us."

P3 operated a business that was dependent upon other small business operators and material suppliers to service clients effectively. P3 stated that "Our network of business colleagues was invaluable to us as we communicated with others to find out about resources, legal challenges, regulations, and everything else that was changing so fast." Previous working relationships and postdisaster partnerships were invaluable to this participant as the company worked to establish insurance claims processing in conjunction with local insurance agents, among other service partners that were also displaced. The company leaders by necessity committed to maintaining communication with city officials, regulatory officials, property owners, and material suppliers to respond to construction needs for community rebuilding. Business continuity planning strategies

that the small real estate businesses leaders used to withstand the unplanned business disruptions and maintain sustainability after a natural disaster will assist planning and recovery officials with postdisaster community recovery initiatives.

Table 5

Strategic Components of Emergent Theme 2: Stakeholder Engagement

Strategic component	P1	P2	P3	<i>N</i>	Emergent theme
Stakeholders	12	17	24	53	b
Community	9	16	15	40	b

Emergent Theme 3: Planning and Critical Processes

Medina (2016) found that understanding strategies to increase the sustainability of small business enterprise helps fill fundamental knowledge gaps for business owners, academics, and practitioners and increases the likelihood of survival and sustainability for small business owners that experience an exogenous shock such as a natural disaster.

Chen (2015) asserts that the identification of critical processes leads to increased organizational development and operational efficiencies to maximize profitability and sustainability. Barrett (2015) states that the identification of essential processes leads to improved organizational development and operational efficiencies. This research reaffirms that effective business continuity strategies increase the survival and sustainability of small businesses in the aftermath of a natural disaster. Effective BCP and identification of critical processes are critical strategic components of BCP.

Development and implementation. Guo and Li (2016) maintained that disaster planning must evolve to incorporate changing processes and transform to anticipate

unexpected business disruptions. The participants' responses in this study indicate that organizational business continuity planning was an ongoing process developed to improve the capacity to respond to unplanned business interruptions. The identification of critical processes led to increased organizational development and operational efficiencies to maximize profitability and sustainability. Review of the postdisaster business continuity plans confirmed that the projects included identification of critical processes, responsible parties, dependent processes, and business impact analyses. The leaders identified continuing education opportunities for BCM and proactively engage in BC planning. According to Jansson, Nilsson, Modig, and Vall (2017), business leaders must be committed to sustainability plans and practices. The small business managers are supportive of the organizations business continuity and sustainability plans and presented evidence to demonstrate how the policies have contributed to strategic competitiveness.

Review of business continuity planning documentation and information gleaned during participant interviews yielded the following information. P1's program did identify critical businesses processes and process dependencies. The business impact analysis portion of the plan was detailed and unique to P1's organization. P2 was a mortgage and insurance company and used a custom disaster recovery plan. Critical processes had been identified based on P2's extensive, in-depth knowledge of business operation and the program is updated approximately quarterly. P2 had been a member of management since the business was started and had, with the help of his spouse and partner, developed and revised the plan as the company grew and expanded. Historical analysis and recovery from smaller disasters and continuous revision of the continuity

plan resulted in a comprehensive, tailored plan with clear process paths with different business impact scenarios. The business plan was very analytical and detailed.

According to P3, the management team had developed a business continuity plan a few months before the 2005 hurricane because a senior member of the team is a project management professional with experience in business continuity planning with other organizations. Management identified critical processes and established a business impact analysis. The identification of essential processes led to increased organizational development and operational efficiencies to maximize profitability and sustainability. P3's business is multifaceted, and identification of critical processes was crucial for business survival. As the company has matured, "...we use a formal business continuity plan that we update annually. All managers update the processes for their department and conduct business impact analysis to present at the annual meeting. We develop a master plan implementing contribution from each of the department leaders." Review of the postdisaster business continuity plans confirmed that the projects included identification of critical processes, responsible parties, dependent processes, and business impact analyses.

Since the management team for P2 had developed and refined their BCP since the inception of the business, the plan was useful and identified a hierarchy of processes. Of the three participants, P2's program was the most comprehensive. The continuity plan focused on the interdependency of processes among departments and clear identification of the critical organizational processes. P2's plan included business impact studies for natural disasters as well as loss of essential personnel events and supplier disruptions. P2

emphasized that he focuses on the postdisaster recovery plan because he experienced the costs associated with a lack of operational planning. The current continuity plan was very extensive.

Review and revision. P1 conducts annual reviews and revisions of the BCP to accurately identify critical processes. P1 and P2 emphasized that the Hurricane Katrina experience reinforced the importance of identifying essential pathways. P2 shared, “The company has always had a disaster response plan. We expanded and improved the plan as the company grew. It started as a simple document, like a sort of operation manual that *** developed. As the business got bigger and our services differed, and we hired more people, she updated the manual. She kept up with it until she passed away. After that, our manager became our business planning person, and she oversees documenting and updating the manual. I stay involved with it because I know how everything works. What depends on what. We meet whenever we need to talk about the plan. Me and the managers, we all work together to keep up with the business disruption plan. We review the plan together, as a team, every spring before the start of hurricane season. Every time we have a major business change, we document and update our disruption plan. It is part of our business model. We learned a lot from Katrina. It’s important to keep it right.”

P3 led a relatively young company at the time of Hurricane Katrina but by the nature of the business had project management tools in place. P3 credited effective operations management as the impetus for the survival of the young firm. According to P3, “We had just developed a basic plan based on a standard plan that we got offline. We were able to maintain communications, our network, client contacts and technology...”

However, due to the severity of the damages caused by the 2005 hurricane, P3 indicated that "...we were overwhelmed at first. We weren't sure that we could rebuild. Our network was so disrupted that we had trouble implementing some of the processes that we had in place. Everyone was so scattered; colleagues and clients were in different parishes and states after the storm. Politics caused even more difficulties in identifying and utilizing resources. The city's infrastructure was almost non-existent." The business is multifaceted, and identification of critical processes was crucial for business survival. As the company has matured, "...we use a formal business continuity plan that we update annually. All managers update the processes for their department and conduct business impact analysis to present at the annual meeting. We develop a master plan implementing contribution from each of the department leaders." P3 maintained the original plan as well as all revisions made to date which documented and illustrated the program revisions in response to changes in critical processes over the years.

The participants indicated a thorough understanding of the unique aspects of disaster recovery. Participants have progressively improved the plans for postdisaster business continuity and include the participation of management from all areas of the organizations. The leaders emphasized how vital business continuity planning was to their postdisaster and long-term sustainability. Review of the postdisaster business continuity plans confirmed that the strategies included identification of critical processes, responsible parties, dependent processes, and business impact analyses. The leaders identified continuing education opportunities for BCM and proactively engage in BC planning. The small business managers are supportive of the organizations business

continuity and sustainability plans and presented evidence to demonstrate how the policies have contributed to strategic competitiveness.

Sahebjamnia, Torabi, and Mansouri (2018) emphasized the importance of establishing organizational resilience to withstand unplanned business interruptions. As stated by McKnight and Linnenluecke (2016), postdisaster sustainability planning enables small business owners to identify primary recovery systems and business continuity planning may expedite the resumption of services in the event of a disaster. This study was significant as it affirms that leaders of small real estate businesses use BCP strategies used to increase the small business community's ability to efficiently and expeditiously re-establish commerce, particularly in the real estate industry, after a large-scale natural disaster.

Table 6

Strategic Components of Emergent Theme 3 Planning

Strategic component	P1	P2	P3	<i>N</i>	Emergent theme
Development and Implementation	25	23	30	77	C
Review and revision	3	8	10	21	C

Emergent Theme 4: Disaster Response

According to Sahebjamnia, Torabi, and Mansouri (2018) timely resumption of business operations in the wake of any disruption event is critical to business sustainability. P1 stated that there was no time to hesitate after the disaster. He was very hands on and involved in almost every aspect of the recovery. He emphasized that small business owners must respond quickly with due diligence, commitment, and vigilance. P1

advised that small business owners take ownership of operations, be accountable and proactive. As P2 asserted, “Time is money, and small business operators only live off the money and opportunities, we make for ourselves. Get in there and get things done. You can’t wait.” P2 has tried to develop a plan that will mitigate any disruption in services to clients. He believes that responsiveness after a natural disaster is paramount, little to no business downtime is his goal. He has expanded his operations to have offices in Northwest Louisiana as well as Southeastern Louisiana. His team cross trains on a consistent basis and all offices and leaders contribute to the business disruption plan and training in the implementation of the plan, “...this enabled us to not only maintain operations no matter the extent of the disaster but to expand operations too. A win situation.” Effective planning is vital to timely resumption of business operations in the aftermath of a disaster.

Business Impact Analysis. Rossmiller, Lawrence, Clouse, and Looney (2017) purport that business continuity plans are useful tools for small business leaders to implement effective processes and employ resources available for rebuilding. P1 had developed a business impact analysis as part of his business operation plan before the 2005 hurricane Katrina using a customized online template. The plan identified the business impact financial costs. P1 had a clear map of his expected expenses. P1 indicated that the business impact analysis that his team had developed was the most helpful in the recovery. P1’s team was able to, “conduct property damage assessments, establish recovery point objectives, repair costs, identify necessary resources, establish estimated timelines and reestablish services for the tenants....” P1 shared plan

documentation to illustrate how the plan developed before hurricane Katrina is very different from the plan in place today. P1 shared that in the aftermath of Hurricane Katrina, company leaders reassessed integral processes on a regular basis because they changed so rapidly as codes, regulations, and suppliers changed. P1 was able to rent units when there was very little supply in the area which garnered higher rents and higher revenues. P1's company had experienced an unplanned business disruption a few years before the 2005 hurricane and management had devised a business impact plan in response. One of the business impact scenarios included in the analysis was water and wind damage due to a tropical event.

P3 Management identified critical processes and established a business impact analysis. The managers update the processes for their department and conduct business impact analysis to present at the annual meeting. "We develop a master plan implementing contribution from each of the department leaders." The nature of the services provided by P3's firm requires responsiveness in the wake of a large scale natural disaster that results in infrastructure damage. Construction companies need to be some of the first in the area. According to P3, "We were blessed to have a plan. It gave us some semblance of normalcy in a chaotic environment. It wasn't the best plan, but at least we had somewhere to start, and something to start with...we were able to maintain operations, but we had to be flexible and creative...we just jumped right in, we never considered not going back, it was our home, our community."

Documentation. Jansson, Nilsson, Modig, and Vall (2017) that established operational sustainability planning processes and experience lead to increased revenues

and long-term sustainability. The cost estimates and the critical process maps available to P1 as part of the BCP enabled his company to work with contractors, insurance companies, and banks to rebuild faster than his competitors. P1 shared plan documentation to illustrate how the plan developed before hurricane Katrina is very different from the plan in place today. P1 shared that in the aftermath of Hurricane Katrina, business leaders reassessed processes on a regular basis because they changed so rapidly as codes, regulations, and suppliers changed. P2 was a mortgage and insurance company and used a custom disaster recovery plan. Critical processes had been identified based on years of experience in the firm.

Jansson, Nilsson, Modig, and Vall (2017) assert that established operational sustainability planning processes and experience lead to increased revenues and long-term sustainability. Strakova (2017) states that effective analysis of business operations and capabilities increase stability and development of small businesses. Based on the research results, future and current small business leaders who had business continuity plans in place resumed and maintained operations after a large-scale disaster and maintained long term sustainability, increased revenues, growth and competitiveness. Leaders of small real estate firms should implement business continuity planning focused on business planning, stakeholder engagement, operations management, and responsiveness.

Table 7

Emergent Theme 4 Strategic Components

Strategic component	P1	P2	P3	N	Emergent theme
Business impact analysis	21	27	20	68	d
Documentation (agreements, plans, insurances)	11	9	8	29	d

The findings revealed that small business leaders who had a business continuity plan in place before a natural disaster experienced a positive outlook during the emergency, were organized in the aftermath of the natural disaster and resumed and continued operations after a natural disaster. Four recurring themes were evident through review of data gathered through participant interviews and document reviews in this study. The four general ideas to increase business sustainability were: (a) effective business planning practices including maintaining and organizing important documentation, employee training and skills, and competitive technologies, (b) operations management including clearly defined critical processes, (c) stakeholder engagement via a robust small business network and effective communications, and (d) timely response to disasters.

Applications to Professional Practice

Increased awareness and understanding of practical business sustainability planning strategies have the potential to aid small businesses during the disaster recovery process. The research identified essential components of disaster recovery as effective risk analysis and business interruption cost analysis and planning, continuing education and stakeholder engagement, expedited responsiveness, and sufficient identification of

critical processes (effective operations management). Business leader education about disaster response training methodologies and processes will improve effective small business postdisaster sustainability planning for small real estate businesses and the ability of community leaders, housing industry practitioners, and disaster recovery officials to understand, visualize, coordinate, and efficiently manage postdisaster entrepreneurial concerns in a rapidly evolving environment. The information from this research may assist small business professionals that operate in a disaster-prone area to be more proactive in business continuity planning to improve resumption of operations due to an unplanned business disruption. Business leaders who developed, maintained and updated disaster sustainability plans experienced an increase in long-term sustainability, competitiveness, and growth.

Implications for Social Change

The findings of this research study contribute to social change through the identification of effective strategies to increase small businesses sustainability in the real estate industry. Effective business continuity strategies keep communities intact, reestablish commerce, and contribute to regional economic sustainability (Schrank et al., 2013). Small business disaster recovery requires a continuous partnership among the small business owner, the owner's family, customers, and the community (Marshall & Schrank, 2014). Small businesses are significant economic contributors, and postdisaster sustainability planning increases the small business owner's ability to re-establish operations and contribute to community redevelopment (Marshall & Schrank, 2014).

The research data indicated that small business leaders consider effective planning, stakeholder engagement, effective operations management and responsiveness the essential aspects of postdisaster business continuity planning. The research findings of postdisaster recovery strategies are especially crucial for small businesses because identification of effective sustainability planning practices leads to increased preparedness and recovery strategies for the small business sector and reduced economic vulnerabilities in areas dominated by small business owners (Schrank et al., 2013). Successful recovery practices will assist community leaders, housing industry professionals and disaster recovery officials to understand, visualize, coordinate, and effectively manage postdisaster concerns to increase community resilience (Chang et al., 2012; Lam et al., 2012).

Recommendations for Action

The findings of this research could encourage small business leaders to develop and implement small business postdisaster business continuity plans. Based on the research results, future and current small business leaders who had business continuity plans in place resumed and maintained operations after a large-scale disaster and maintained long term sustainability, increased revenues, and growth and competitiveness. Leaders of small real estate firms should implement business continuity planning focused on business planning, stakeholder engagement, operations management, and responsiveness. As indicated in the research findings, small business leaders with the proper education and training to develop effective small business postdisaster

sustainability plans experienced contributed to community and economic development through engagement with community stakeholders and constituents.

The findings from this research study may facilitate small business education regarding the benefits of post disaster small business continuity planning. This research study will aid continuing education providers in the development of training and reference materials to aid in developing course content. Lastly, this research emphasizes that small business leaders in the real estate industry must proactively engage in small business post disaster planning, development and implementation.

Recommendations for Further Research

The first limitation of this study was the number of participants. According to Swanciger (2016), large companies regularly use sustainability planning, but business continuity planning is not as popular with small businesses. I recommend further research on this topic include a more significant number of participants as more small businesses begin to implement postdisaster continuity plans. The second limitation was the geographical location of the study and the specific phenomenon analyzed, which may limit the application of the findings in other geographic areas with different types of natural disaster phenomenon. I recommend that the additional studies on this topic include regions other than Southeastern Louisiana that may experience other natural disaster phenomena.

Reflections

I discovered that determination, commitment, and patience facilitated advancement in this endeavor despite various unexpected circumstances. The interview

process provided a more thorough understanding of the frustrations and pride business owners experienced resuming and sustaining after a large-scale natural disaster. The frequent occurrence of natural disaster events in Southeastern Louisiana is indicative of the need for effective small business postdisaster sustainability planning.

I attempted to eliminate personal biases, or any beliefs developed through my experiences as a small business owner by following the interview protocol and excluding participants that operate in the same industry I once managed (see Appendix C). The interview protocol ensured consistency with each participant reduce unintentional bias. To add validity, I coded the keyword phrases participants used in the interview process. I transcribed the recorded interviews and requested that the participants validate the transcribed responses for accuracy. Member checking increased the validity of the study. I ensured data saturation occurred after the discussions were complete so there would be no new information.

Conclusion

Identification of effective strategies that leaders of small real estate business used to resume and sustain operations after a catastrophic natural disaster reinforce the importance of small business leader commitment to post disaster sustainability planning and implementation. Small real estate companies are vital to redevelopment in a post disaster affected area. Effective post disaster sustainability planning allows small business leaders to engage with community leaders to retain existing jobs, create new job opportunities, facilitate community redevelopment and growth, and stimulate economic development. These strategies help stabilize communities in the aftermath of natural

disasters by creating and expanding business opportunities. Small business leaders in Southeastern Louisiana may increase business sustainability after a natural disaster with comprehensive post-natural disaster sustainability planning. Social change through natural disaster preparedness may increase economic viability and sustainability in the affected communities.

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Appendix A: Invitation to Participate

Good morning Mr./Mrs. _____,

I am doctoral candidate with Walden University conducting a research study to explore strategies that small business leaders use to sustain operations after a natural disaster. Small business owners and managers who have provided or who are providing real estate services, other than real estate brokerage services, in Southern Louisiana after a natural disaster are invited to participate. Participation will require no more than an hour of your time in total and at a time and location of your convenience. An informed consent form which includes additional information about the study and your participation is attached to this email to allow you to understand this study before deciding whether to take part.

This study is voluntary. You are free to accept or turn down the invitation. No one will treat you differently if you decide not to participate in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time. Please note that not all volunteers will be contacted to take part. The first three respondents that meet participant criteria will be selected to participate.

Thank you for your consideration and please contact me with any questions.

Best regards,

Vianka Maria Miranda

vianka.miranda@waldenu.edu

(504) 400-4420

Appendix B: Participant Consent Form

You are invited to take a part in a research study to explore strategies that small business leaders use to sustain their businesses after a natural disaster. The participant criteria for this research study are that your organization is a small business as defined by the United States Small Business Administration domiciled in Southern Louisiana that offers a service in the real estate industry, other than real estate brokerages, has survived a natural disaster, and has a small business disaster recovery and sustainability plan in place. I obtained your contact information from either publicly available contact information located on the Internet, your local real estate association or the local Chamber of Commerce. This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Vianka Maria Esteves Miranda, who is a as a doctoral student at Walden University.

Background Information:

The purpose of this study is to explore strategies that small business leaders in the real estate industry use to maintain businesses operations after a natural disaster.

Procedures:

If you agree to be in this study, you will be asked to:

- Participate in a twenty to thirty-minute audio recorded interview
- Review a written transcription of the interview to confirm accuracy
- Provide relevant, publicly available documentation regarding the business’ post disaster sustainability plan that you feel that it may enhance an understanding of the post disaster plan.

Here are some sample questions:

- What type of disaster did you experience?
- What post-disaster sustainability processes strategies did you use to sustain your business after the natural disaster occurred?
- What sources of reference and methodologies did you use in developing the post disaster sustainability plan?
- What obstacles did you encounter in implementing the plan?
- How did you address the key obstacles to implementing a post disaster sustainability plan?

Voluntary Nature of the Study:

This study is voluntary. You are free to accept or turn down the invitation. No one will treat you differently if you decide not to be in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time. Please note that not

all volunteers will be contacted to take part. The first three respondents that meet participant criteria and indicate consent to participate will be selected.

Risks and Benefits of Being in the Study:

Participating in this study would not pose risk to your safety or wellbeing. The benefit to the participants in this study is that the answers provided will increase understanding of factors that improve sustainability in the wake of a natural disaster for Louisiana small businesses that provide real estate services.

Payment:

No payment, compensations, or gifts of any form will be provided to study participants.

Privacy:

Reports coming out of this study will not share the identities of individual participants. Details that might identify participants, such as the location of the study, also will not be shared. The researcher will not use your personal information for any purpose outside of this research project. Data will be kept secure by Vianka Maria Esteves Miranda on a in a locked file cabinet in hard copy and on a password protected USB drive, when possible, for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email at vianka.miranda@waldenu.edu and /or (504) 400-4420. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss your concerns with you. Her phone number is (612) 312-1210. Walden University's approval number for this study 11-16-18-0340134 and it expires on November 15, 2019.

Please print or save this consent form for your records.

Obtaining Your Consent

If you feel you understand the study well enough to decide about it, please indicate your consent by replying to this email with the words, "I consent."

Appendix C: Interview Protocol

Participant Code _____	Interview Date _____
<p>Introduce the interview and set the stage—often over a meal or coffee Reiterate the purpose of the study and how the interview will proceed.</p>	<p>Good (morning, afternoon). Thank you for taking the time to meet with me. I appreciate time and willingness to participate in my research study regarding strategies that small business leaders use to develop and implement a small business post disaster business continuity plan. I want to remind you that all the information you provide is confidential as stated in the participant form that I provided to you via email. Remember that your participation is voluntary and appreciated, however, you may withdraw at any time without penalty. I will ask 9 questions, if you require clarification or can add any information to expound upon the topic, please do not hesitate to share that with me. Do you have any questions or concerns before we begin?</p>
<ul style="list-style-type: none"> • Watch for non-verbal queues • Paraphrase as needed • Ask follow-up probing questions to get more in-depth 	1. What type of disaster did you experience?
	2. What post-disaster sustainability processes strategies did you use to sustain your business after the natural disaster occurred?
	3. What sources of reference and methodologies did you use in developing the post disaster sustainability plan?
	4. What obstacles did you encounter in implementing the plan?
	5. How did you address the key obstacles to implementing a post disaster sustainability plan?
	6. How did your organization develop the post-disaster sustainability plan?
	7. How did your business leaders respond to development of the post-disaster sustainability plan?
	8. How, if at all, have you revised your post-disaster sustainability plan since the disaster?
	9. What else can you share with me about the development and implementation of your organization's post-disaster sustainability plan?
<p>Wrap up interview thanking participant. Verify that I have the most up to date participant contact information and that the participant has my information as well.</p>	<p>Thank you so much for taking the time to speak with me. I want to make certain that you do still have my contact information (provide business card). Also, I would like to verify your information as (restate participant contact information). Do you have any questions for me at this time?</p>
<p>Schedule follow-up member checking interview and discuss member checking process.</p>	<p>As part of the research process and to ensure that I accurately record the information that you have shared with me, I would appreciate the opportunity to share the transcribed and interpreted information that I will use to develop my findings with you for your review and verification within the next couple of weeks, what would be a good day and time for us to meet.</p>