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Financial Illiteracy and Minority Small Business Failure

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Walden University
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Abstract

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MBA, Saint Leo University, 2010

BS, Saint Leo University, 2008

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Minority small businesses are important contributors to the U.S. economy. As such, financial illiteracy resulting in the failure of minority small businesses is a significant problem. The purpose of this study was to determine whether a quantitative correlation exists between financial illiteracy and minority small business failure in the United States. The theoretical foundation consisted of administrative, systems, human capital theories and system thinking, financial, and management concepts. The research questions exhaustively reviewed secondary financial literacy and various business management research data that relate to the ability of the U.S. minority population to create wealth through sustained entrepreneurial success using a cross-sectional design. Data sources included the National Financial Capability Study, the Annual Survey of Entrepreneurs alongside other U.S. Census Bureau reports, the Financial Literacy Annual report, and the Small Business Administration database. Information from 111 randomly selected minority entrepreneurs was examined. Data were coded and analyzed using quantitative analysis software via correlational themes through which Positive (+1) variable relationships were evident. Study findings suggested a significant correlation between financial illiteracy and minority small business failure. The results propose positive social change implications by contributing original knowledge that supports the theories in management. The results can also be used by policymakers, investors, and helping agencies to address financial and management readiness more accurately in the minority small business sector to offer solutions for owners' sustainability. This research is significant for minority business owners, educators, and investors in the U.S. economy.

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Dedication

Through education comes literacy and inclusion. We as people of democracy will prosper if the opportunity to attain knowledge is encouraged and made accessible to all who are interested without barriers such as discrimination. Moreover, education offers possibilities to discover and gain knowledge that would otherwise be a mystery. And more importantly, it allows us to understand the world in the big picture format and from differing perspectives.

I dedicate this work to future scholars, researchers, and minority small business owners as a resource to gain knowledge in the finance and management fields of study. In addition, I dedicate this work to the Small Business Association and all practitioners in the field as I look forward to joining the tireless pursuit to make minority communities, and the nation, a better place through the eradication of social ills such as financial illiteracy and small business failure.

Acknowledgments

I thank God first and foremost, for with him, all things are possible. Isaiah 40:30-31 states that "They that wait upon the Lord shall renew their strength, they shall mount up with wings as eagles; and they will run and not be weary and walk and not faint."

For this accomplishment, I acknowledge my sons, Tez (Martez) and Tre' (Leo), and my sisters and friends, Daryl and Lisa. I thank you all for your patience, sacrifices, and the love you never stopped giving during my many absences on this journey.

I further thank Dr. Bouvin and Dr. Wright-Babb for lowering their wing to teach me to fly. I tried to be as weightless as possible in the effort to limit the wear and tear. I will be forever grateful for the patience and encouragement you (and everyone else I did not mention) provided that contributed to my successful completion of this dissertation.

May God Bless You All!

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Every year, millions of small businesses fail in the United States. Research shows that more than 286,000 of the estimated 2,481,000 small businesses that fail annually close due to some form of financial illiteracy (Statistic Brain Research Institution, 2015; U.S. Small Business Administration, 2015). The issue of financial illiteracy is especially concerning for minority-owned small businesses. Although the U.S. Census Bureau has found that about a million of the more than a billion small businesses in the country are minority owned, the failure rate of these businesses is higher than that of other groups (Fairlie & Rob, 2008). Financial illiteracy may be a factor. Research shows that racial minorities in the United States have high levels of financial illiteracy (Amoah, 2016; Cerarini et al., 2010; Elan & Goodrich, 2011; Lusardi, 2005, 2011; Mandell, 2004).

The high level of financial illiteracy among racial minority groups, concern for the disproportionate distribution of minority-owned businesses, and the elevated number of small business failures justified the necessity for this scholarly research. In this study, financial illiteracy was understood to be the inability to appropriately manage monetary resources to create a successful business outcome. Minority small business failure was defined as the closure or discontinuity of sales and/or services by a minority-owned or -operated business. The positive social change implications of this study include contributing original knowledge to the field of management that may support initiatives to decrease minority small business failure in the United States.

In this chapter, I present the background of the study, problem statement, and the purpose of the study. Also, the research questions (RQs) and hypotheses, theoretical foundation, and the nature of the study are provided. Last, the assumptions, scope and delimitations, limitations, and significance of the study are discussed.

Background of the Study

Financial illiteracy is extensive throughout the U.S. population and more so among minority demographic groups (Lusardi, 2008; Singh, 2014). Financial illiteracy often leads to economic crisis caused by too much spending, bad investment decisions, and high credit card use, which in turn increase social problems such as excessive debt and business failure (Sukumaran, 2015). Lusardi (2008) found that financial illiteracy not only affects decision-making but contributes to poor planning, nonparticipation, and bad borrowing behavior as well. In later research, Lusardi with Mitchell (2011) found that adequacy of financial knowledge is also a key determinant of how well individuals make monetary decisions and execute financial transactions. When the economic status of minority Americans is examined, the data indicate extremely high financial illiteracy (Amoah, 2016; Cerarini et al., 2010; Elan & Goodrich, 2011; Lusardi, 2005, 2011; Mandell, 2004), showing an alarming need for financial literacy intervention (Daniels, 2011).

Making up 95% of all business organizations in the United States, small businesses are vital components of the free enterprise system (Abdelsamad & Kindling, 1978) but, despite their prominence, are vulnerable to failure (Dunn, 2011). According to the U.S. Small Business Administration (U.S. SBA, 2015) over 50% of small businesses fail in the first year and 95% within the first five. Additional studies of small business failure have also revealed that a large number of entrepreneurs, minorities in particular, start their business with a great idea or a need to survive without adequate preparation but lack a solid financial education and have little to no experience in performing management concepts and competencies (Mijid & Bernasek, 2013; Williams & Williams, 2011). Bates (2011) underscored how acquiring the appropriate educational credentials such as financial knowledge, work-skills, and applicable experience in areas such as management has long been challenging for minorities. In his work Bates recalled a conclusion by Brimmer, the first Black American to serve on the Board of Governors of the Federal Reserve System, that most minority business owners lacked the managerial competence to succeed in the free market. Using Bradley and Moore's (2000) study as a basis, Ropega (2011) cited three principal causes of small business failure in the United States: (a) insufficient or risky capital management, (b) inadequate management skills and knowledge of the business, and (c) excessive debt as primary explanations for small business failures in the United States (see also Dahmen & Rodriquez, 2014). Although focused on businesses overall, Ropega's findings reinforces Bates's research showing the challenges for minority small business owners.

In previous studies concerning financial illiteracy and minority small business failure, researchers have cited various forms of poor budgetary management as the most frequently reported reason for failure (see Lusardi & Mitchell, 2011; Ropega, 2011). There is a gap in the literature, however, on substantial theoretical knowledge directly addressing the relationship between financial illiteracy and minority small business failure. Because much of the existing relevant work has been completed on small samples of the U.S. population, the study results are fragmented and hard to generalize to the broader population (Gaskill et al., 1993; Lusardi, 2010).

Experts have acknowledged the importance of the small business sector to global economic growth (Eresia-Eke & Raath, 2013; Ladzani & van Vuuren, 2002). Given their contribution to national income, Nguyen and Luu (2013) posited that small- and medium-size businesses are the backbone of all economies. Even though there has been considerable theoretical, conceptual, and empirical work on the economics of education and small business failure, there has been little attention given to how people acquire, verify, and deploy financial knowledge (Glewwe, 2002; Lusardi & Mitchell, 2013). This study is needed for two reasons: first, to confirm or deny the correlational problem of financial illiteracy and minority small business failure, and, second, to fill the gap in knowledge concerning the issue.

Problem Statement

According to the Standard & Poor Global Survey, the United States ranked 14th in the world behind all other advanced countries in financial literacy in 2014 (Silver, 2021). The financial literacy level of the U.S. adult population at any given time is approximately 57%, marginally above Botswana, whose economy is 1,127% smaller (Iacurci, 2019). Additionally, the Financial Industry Regulatory Authority's (FINRA) 2018 National Financial Capability Study (NFCS) revealed that financial literacy in the United States has declined from 42% to 34% since 2009 and that the minority populace continues to be the least financially capable (FINRA Investor Education Foundation, 2019). In 2018, the U.S. SBA reported 1,003,000 business openings and 888,000 closings (U.S. Small Business Administration Office of Advocacy, 2019).

Financial illiteracy and minority small business failure are significant problems throughout the United States. The general management problem addressed in this study was the impact of financial illiteracy in the U.S. minority small business owners population. The specific management problem of focus was the potential correlation between financial illiteracy and minority small business failure. In conducting the study, I sought to expand management research concerning financial literacy and minority small business failure. The research may spur positive social change through the contribution of original scholarly knowledge for the immediate initiation of problem resolution.

Purpose of the Study

The purpose of this study was to determine whether a quantitative correlation exists between financial illiteracy and minority small business failure in the United States. I performed an exhaustive review of secondary financial literacy and various business management research data that relate to the ability of the U.S. minority population to create wealth through sustained entrepreneurial success. The study is an extension of previous economic and management works with a minority community focus. The independent study variable was financial illiteracy, and the dependent variable was minority small business failure. Subcharacteristics of financial literacy (interest, inflation, bond pricing, mortgage, and risk) and subcharacteristics of business management concepts and competencies (cash, planning, financial reporting, capital structure, and training-education) that quantify business success or failure served as covariate variables.

Research Questions and Hypotheses

RQ1: What is the correlation between financial illiteracy and minority small business failure?

$H_0$1: There is no significant correlation between financial illiteracy and minority small business failure.

$H_1$1: There is a significant correlation between financial illiteracy and minority small business failure.

RQ2: What is the correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent?

$H_0$2: There is no significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

$H_1$2: There is a significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

The variables were previously measured in the NFCS (FINRA Investor Education Foundation, 2019) and in other studies (see Lussier, 1995). Hence, for consistency and validity, I used the same variable measurements.

Theoretical Foundation

The theoretical foundation of this study consisted of the following theories and concepts: Fayol's (2016) administrative management theory, Tate's (2009) systems thinking in conjunction with von Bertalanffy (1968, as cited in Hammond, 2003) general system theory, and Schultz's (1961) human capital theory. I also drew from Keats and Bracker's (1988) conceptual model for small firm performance, Lussier's (1995) success or failure (S/F) prediction model, and Gadenne's (1998) study of critical success factors for small business. Other concepts of financial literacy regarding the characteristics of financial management also informed the study.

The major theoretical proposition of the study was that the development of human resources such as financial literacy is essential to the success of a whole system such as entrepreneurship. Fayol's (2016) administrative management theory focuses on organization leadership, and Tate's (2009) system thinking concepts suppose that a whole system succeeds through managers collaborating in and across several functional systems. von Bertalanffy's (1968, as cited by Hammond, 2003) general systems theory suggests that to understand any system, it is necessary to not only understand the parts but the relations that exist between them as well (p. 112). Schultz (1961) initiated the human capital revolution in economic thought by expressing his belief that laborers (i.e., entrepreneurs) become capitalists by acquiring knowledge and skills. Keats and Bracker (1988) proposed a conceptual model that suggests that small business performance outcomes are influenced by multiple variables, which include individual owner characteristics, behaviors, and environmental factors. The Lussier (1995) prediction model was designed to determine which variables are more important to small business successes or failures (see also Lussier & Halabi, 2010). In studying critical success factors, Gadenne (1998) analyzed success or failure influences such as management techniques concerning the impact on financial success and by examining numerous diverse practices and small business strategies that may directly affect finances. I also drew from behavioral theories and concepts of social capital and exclusion, signaling, pecking order, and positioning. Chapter 2's literature review provides a more detailed explanation of the theories used to shape the research foundation.

Nature of the Study

In this comparison study, I used the quantitative method to determine whether a correlation exists between financial illiteracy and minority small business failure. Determining whether a relationship exists between study variables is a basis for generalization (Frels & Onwuegbuzie, 2013). According to Patton (2002), quantitative reach allows for a broad generalization of findings for large participant groups with limited question sets. For this reason, I determined the quantitative correlational approach to be the most appropriate method for this study.

For this study, I understood the independent variable financial illiteracy to be the inability to effectively manage monetary resources to create a successful business outcome. The dependent variable, minority small business failure, was accepted as the closure or discontinuity of sales or services by a minority-owned or operated business. The covariate variables included subcharacteristics of financial literacy and business management concepts and competencies that quantify business success or failure. The former included interest, inflation, bond pricing, mortgage, and risk. The latter included cash, planning, financial reporting, capital structure, and training-education.

I performed a regression analysis to determine variable predictability. I used a correlational, cross-sectional, descriptive design to add validity to the study findings. The secondary data that I analyzed were from earlier studies and public record reviews. These included research data previously collected by post and online and from one-on-one telephone interviews. Data were analyzed using Pearson Statistical Package for the Social Science (SPSS) V27 correlation procedures. Due to the probability of causation association, I examined the relationships of several related variables along with the independent and dependent variables. I used correlation coefficients -1.00 and +1.00 to determine the relational existence between the variables.

Definitions

There are several terms in the study that may have multiple and differing meanings. The following definitions are used throughout the study:

Business failure: A business or organization that is unable to pay accumulated debts (Boettcher et al., 2014).

Exclusion: The inability to access financial products and services through conventional organizations and institutions such as banks and credit unions (Hasan & Jamil, 2014; Koyagialo, 2016).

Financial illiteracy: The lack of skills and knowledge on financial matters to confidently take effective action that best fulfills a business, personal or global community goals (National Financial Educators Council [NFEC], 2020).

Financial literacy: A measure of the degree to which an individual understands the concepts and is able to manage personal financial decisions while simultaneously mindful of life events and changing economies (Remund, 2010). More recently, Sukumaran (2015) defined financial literacy as requiring education and skills to understand and manage finances.

Financial management: The responsibility of managing cash activities, forecasting, financial reporting, and capital structuring (Hill, 2019).

Human Capital: An accumulation of prolific knowledge and skills embodied in human labor (Zakaria & Yusoff, 2011).

Minority small business: An independently owned and operated for-profit business with fewer than 1,500 employees that is 51% controlled by minority group members who are U.S. citizens doing business primarily within the United States or contributing to the U.S. economy through taxes (U.S. SBA, 2017).

Assumptions

I assumed that the secondary data used in the study were accurate. I also assumed that survey samples were representative of the minority business owner culture and that participants were honest and truthful in their responses. Additionally, given that financial literacy and business management skills are obtained through education and training which has long been associated with human capital access (Becker, 2008), I assumed that inclusion and other capabilities and opportunities such as financial education and experience are significant rudiments in the foundation of minority financial literacy. Further, I assumed that human and financial capital knowledge is necessary to succeed in business ownership.

Scope and Delimitations

The perceived correlation between financial illiteracy and minority small business failure was the primary management focus of this research. The study addressed several causes of financial illiteracy and the probable correlation with minority small business failure. I chose this area of concentration because of the elevated levels of minority financial illiteracy and small business failure in the United States (see Harnisch, 2010; Maki, 2004). Delimitations are ways to establish necessary boundaries to keep the research on point (see Florin, 2014).

The target population for the study was U.S. residents classified as minorities and minority small business owners by the SBA. The theoretical framework of financial literacy and business management concepts provided a foundation for the research. The United States was the geographic location of study. The restrictive geographic location, sample group size, and RQs were all key delimitations that potentially increased generalization and the external validity of the study. By focusing on the U.S. minority population, I was able to provide more detailed explanations of the variable characteristics and allow for greater generalization.

Limitations

The use of secondary data obtained from the FINRA and U.S. Census Bureau had many advantages, but it was prone to errors in coverage and content (see Frankfort-Nachmias & Nachmias, 2008). Due to the inherent limitations, several limiting factors existed for the study. The methodological issues; data collection, accuracy, data collection period and purpose associated with secondary data usage was the main limitation. Others included the possibility of coverage error, in which persons or groups are unaccounted for or counted more than once, and content error, where information may have been calculated and/or reported incorrectly (see Frankfort-Nachmias & Nachmias, 2008). I addressed these limitations by performing several data reviews and checks. Because the secondary data did not allow for my manipulation and control, the potential for bias or the introduction of errors on my part was reduced, and validity was enhanced.

Significance of the Study

The contributions of the small business to the U.S. economy are noted in times of economic growth, and the fragility of the sector is a core focus of policy in economic downturns (Farrell et al., 2020). According to the Organisation for Economic Co-operation and Development (OECD, 2019), small and medium enterprises represent 99% of all businesses that contribute to the identity and cohesion of local communities, and minority small businesses account for 1 million of those organizations (U.S. Census Bureau, 2020). Additionally, according to the U.S. SBA (2019), small businesses are the lifeblood of the U.S. economy, creating two thirds of new jobs and 44% of financial activity. Dann Adams, president of global consumer solutions at Equifax, emphasized that if business owners lack the financial skills to manage personal matters, they will more than likely face the same challenges with their business (Sumrak, 2018). According to a recent JPMorgan Chase & Institute report titled *Small Business Owner*

Race, Liquidity, and Survival, the financial challenges small businesses face may be even more substantial for businesses with minority owners (Farrell et al., 2020).

The amount of research examining financial literacy, the effectiveness of literacy programs, and small business failure is growing (Carpena et al., 2017). Yet, there remains limited research on the relationship between financial illiteracy and minority small business failure. In reviewing the literature for this study, I found a lack of theoretical knowledge that directly addresses the probable correlation between financial illiteracy and minority small business failure. Understanding the barriers that minorities face due to financial illiteracy could enable the SBA and other helping agencies to develop more precise programs and learning systems that decrease minority business failure. The study findings could also encourage positive social change by providing new data to assist stakeholders with identifying business practices to avoid and highlighting techniques and skills needed to succeed.

Significance to Theory

This research concerning financial illiteracy and minority business failure contributes valuable theoretical knowledge to the management specialization in the area of finance. The study could also expand the depth of theoretic expertise and add to the broader literary perspective in the field of entrepreneurship. The findings of this study provide original knowledge that could advance management theory by providing evidence of how financial illiteracy is a major contributor to minority small business failure. More specific, the findings of this research will lend to theory in the fields of financial and human resource management and entrepreneurship.

Significance to Practice

Bradley and Moore (2004) stated that the primary causes of small business failure in the United States are insufficient management skills and business knowledge. Young entrepreneurs have courage and passion but often do not have important skills, business knowledge, experience, and necessary networks for funding (Gonul, 2018). By revealing strong evidence that shows relations between financial illiteracy and minority small business failure, this research could be a practical resource for educators, program developers, and financial advisors (Lyons & Chang, 2007). Furthermore, the study can support the advancement of practice by providing scholarly research that can be easily understood, tested, and/or repeated to propel the development of both financial literacy and small business knowledge base learning tools. The study could also inform future minority small business owners of the financial and management literacy skills that should be acquired to operate a sustainable business. The correlational findings may also be of interest to stakeholders such as reformers of curriculum and management scholars.

Significance to Social Change

Gaining financial and management skills and capabilities require opportunities; however, for minority business enterprises, discriminatory barriers have often interfered with the ability to obtain access to financial, educational, and management experiences that support business viability (Bates et al., 2007). The social change implications for this study include the enrichment of minority business literature on strategies that minority entrepreneurs can use to make responsible financing choices (Bewaji et al., 2015). The study outcome shows how financial illiteracy negatively impacts minority groups' abilities to start, operate, and sustain business success. The results can assist owners with identifying risky business practices to avoid and can support agencies in meeting the needs of the minority small business community (Gaskill et al., 1993).

Ultimately, the study may provide a clearer understanding of how the characteristics of financial illiteracy are associated with management behaviors that lead to failure. Even the slightest decrease in minority business failure catalyzed by this research may change the dynamics and enhance community restoration. The study also promotes the reduction of inequalities and encourages the undertaking of entrepreneurship by future minority generations. Because minorities constitute a growing share of small business owners, it is critical to understand where to focus resources and policy attention (Farrell et al., 2020). Therefore, the findings from this study can be used as an empowerment tool for policymakers, investors, and helping agencies to better serve the small business sector in matters of financial and management readiness.

Summary and Transition

In Chapter 1, I introduced the research subject, an exploration of the correlation between financial illiteracy and minority small business failure, and defined the independent variable, financial illiteracy, and the dependent variable, minority small business failure. In the chapter, I also presented the covariate variables: interest, inflation, bond pricing, mortgage, and risk, which are subcharacteristics of financial literacy, and cash, planning, financial reporting, capital structure, and training-education, which are subcharacteristics of business management concepts and competencies that quantify business success or failure. The Background of the Study section showed the importance and the need for this research. Additionally, the problem statement confirmed the relevance and significance of the study, and the purpose statement highlighted the research intent. Then, I gave an overview of the Nature of the Study and presented the RQs and hypotheses. Furthermore, the chapter included concise definitions to ensure understanding of words or phrases with multiple meanings and unfamiliar terminology. Last, the chapter included discussion of the assumptions, scope and delimitations, limitations, and the significance of the study. Next in Chapter 2, I explain the literature search strategy and the theoretical foundation. Then, I review relevant literature on the study topic. This review reveals the gap in research that I sought to fill. The chapter ends with a brief summarized conclusion.

Chapter 2: Literature Review

By reviewing relevant past and current scholarly resources, I seek in Chapter 2 to provide further understanding of the severity of the problems of financial illiteracy and minority small business failure in the United States. The review also supports the study purpose to determine a quantitative correlation between financial illiteracy and minority small business failure in the United States. I performed an exhaustive review of secondary financial literacy and various business management research data that relate to the ability of the U.S. minority population to create wealth through sustained entrepreneurial success.

Previous research in financial literacy and small business has revealed that literacy and ownership are low in the United States, especially in minority populations (Harnisch, 2010). The U.S. NFCS 2015 found that financial capability continues to be much lower among younger Americans, individuals with incomes below $25,000 annually, and those with no post secondary education (FINRA Investor Education Foundation, 2016). According to McManus (2016), 37% of the overall U.S. population identifies as a racial minority, with the percentage higher in Texas and California at 50%. Although minorities own approximately 20% of all U.S. businesses, they are underrepresented in business ownership for populace share (McManus, 2016).

The multifaceted issues of financial illiteracy and minority small business failure present an enormous challenge to many stakeholders in the United States. Financial literacy is much more than knowing what goes on in the commercial world; it includes the ability to make effective decisions by understanding finances to ensure effective decision-making (SMBCEO, 2010). Because minority small business closures affect not only the owner but the community as well, the societal challenges of resolving financial illiteracy and minority small business failures are equally important life-long undertakings that will require continuous work. Through recent obligation of personal time and skills to the financial literacy movement researchers and practitioners have shown a genuine concern for this issue.

The literature review for this study includes an extensive examination of financial illiteracy and small business failure in the United States. The chapter has three sections: Literature Search Strategy, Theoretical Foundation, and Literature Review. The chapter ends with a summary and conclusion.

Literature Search Strategy

For the search strategy for this literature review, I employed a combination of sources. A comprehensive search was performed using key terms and similar language filters. Books and magazines, peer-reviewed journals and dissertations, and government research documents are the primary sources of data. I retrieved articles from electronic databases, including Business Source Complete and Education Resource, Education Resource Information Center (ERIC), ProQuest Central, Small Business Advocacy, which I accessed from the Walden University Library. I also used the search engine Google Scholar and the website Research Gate. The peer-reviewed articles are empirical published systematic reviews, case studies, and analysis.

Key search terms, words, and phrases were *financial illiteracy in America*, *American minority financial literacy*, *minority Americans' financial illiteracy*, *small* *business failure in America*, *minority business failure in America*, *human capital theory in America*, *human capital theory on minority American small business success*, *system theory and American small business success*, *key management skill needed in America*, *minority Americans business management skill level*, *minority education accessibility in America*, and *minority financial management skills in America*. Even though a heightened focus on the problems of business sustainability for minority-owned small businesses in the United States has recently surged, there is still limited current research data available that pertain to the primary management issue: the correlation between financial illiteracy and minority small business failure. To handle the data limitations, I used additional search phrases to find applicable literature for the review. These included, *minority exclusion*, *resource accessibility*, *barriers to business ownership*.

To provide a more profound breadth of past and current studies and to capture a clear theoretical perspective, I reviewed literature dating back to Fayol's (2016) administrative management theory, the early 1960s with Schultz's human capital initiative and Gaskill et al., 1993 views of Adam Smith's *Wealth of a Nation*. The research reviewed from the mid- and late-19th century includes resources on the concepts underlying the independent, dependent, and covariate variables. The search generated more than 200 sources, 95% peer-reviewed, 88% empirical literature from 2013 to 2021, and 86% having been published in the last 3-5 years. The sources predominantly examined financial literacy and small business statistics through case studies, interviews, and surveys. The U.S. Census Bureau, the U.S. Department of the Treasury Office of Financial Education, the SBA, and the FINRA are essential government agencies cited for analyzed data. The literature reviewed was research completed by individuals and organizations concerned with financial literacy and small business survival in the United States.

Theoretical Foundation

In the effort to depict the relationship between financial illiteracy and minority small business failure, I used the classical administrative management, systems, and human capital theories as the theoretical foundation. Principles in management are either detailed or prognostic fundamentals that explain the relationships between two or more sets of variables, usually an independent and a dependent, describing how one variable relate to another upon interaction (Jindrichovska, 2013). Management is the skill or science of achieving goals through people, ensuring that the group does what is required (Olum, 2004). Administration management is the creating and maintaining of an environment in which individuals, accomplish goals working together as a team (Koontz & Weihrich, 1990; Olum, 2004).

The administrative management theory is one of the classical organization theories born out of the school of management. This study concentrated on operational versus physical factors to illustrate the importance of organizational structure in small business success. The first manifestation of the idea was presented as the general management approach in 1916 by a French industrialist, mining engineer, and managing director known as Henry Fayol (Olum, 2004). His study focus was to find the most efficient way to lead an organization. It was not until years later, after additional research, that the theory was published in the 1961 book *General and Industrial*

Management. Fayol stated that management consists of five primary roles: forecasting and planning, organizing, commanding, coordinating, and controlling (Olum, 2004, p. 15). To complement the five principal functions, Fayol also developed 14 managerial principles. Not stopping at policy development, Fayol suggested that groups are systematically interdependent; therefore most business activities can be categorized into six categories: technical, commercial, financial, security, accounting, or managerial (Fayol, 2016).

Often referred to as the "Dean of Public Administration," Luther H. Gulick is another significant contributor to the administrative theory. As a government employee, he is known for his application of administrative management theory and principles to government organizations (Tompkins, 2005). Gulick introduced the concept of departmentalization using design principles and organization charts to create work sections based on processes, individual, place, and purpose, which is still being successfully used in government organizations today (Tompkins, 2005).

In the writing and publication of *Onward Industry* in 1931, James D. Mooney, a mechanical engineer, and Alan C. Riley, a General Motors' top manager, were also valuable contributors to the administrative management theory. In the book, Mooney emphasized organizational structure through the development of three universal principles: coordinative authority responsibilities, scalar-subordinate and superior relationships, and functional task differences (Tompkins, 2005). Scholars in the field agree that the book is a significant contribution to the management theory (Grimsley, 2014).

Because of the importance of administrative and management skills to business success, I concluded that the administrative management theory was appropriate for this study. The theory relates to the RQs centered on the correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

Managerial competencies include the understanding and anticipating of how the whole system is intended to work, and how it may be weakened or even collapse under demands (Tate, 2009) should one of these functions not be adequately carried out (Fayol, 2016). According to Tate (2009), without strong competencies, the business system can become confused, overpowered, blocked, and/or experience a systemic failure. William Tate was a diehard system thinking pioneer. Tate considered systems thinking to be an important part of the management discipline, concerned with understanding a whole system by examining the interactive connections between the components. When a systems thinker views an organization as he did, whole system visualization occurs (i.e., understanding through discussion and analysis its environment, design, and construction). Tate described a complete system as the core units of policies, processes, practices, and people that may be divided further into sub-systems (Gaskill et al., 1993).

Additionally, Tate (2009) noted that systems may be thought of as having clear boundaries (closed or open) having links with other environments. This allows financial, decision-making, and accountability systems to operate alongside hierarchically with each other harmoniously so that systems such as education and school boundaries may be chosen and defined at levels suitable for the designed purpose. He continued to stress that complete system success requires higher levels of management that perform goal-setting development, provide incentives, communication, and reviews. Last, Tate stated that leadership is challenged to realize that for every reliable and consciously designed system there is a shadow or opposing system composed of non rational issues such as politics, trust, ambitions, greed, favors, power struggles, and so forth.

Russell L. Ackoff (2016) was another widely recognized systems thinker innovator, professor, board chairman of the Institute for Interactive Management and the developer of systems methodology interactive design. Even though the Institute for Interactive Management originated in 1951, Ackoff did not introduce interactive design until 1974 in his book *Redesigning the Future*, advocating that system thinking erase boundaries between science and the humanities, thereby coining the term *scianities*. Like Schulz and other system thinkers, Ackoff viewed systems thinking as a holistic attempt to gain an understanding of parts of the behavior and properties of wholes, rather than from roles. Additionally, he asserted that whatever abnormities individuals can see clearly concerning the future that they will take steps to make a change or prevent them from happening. Ackoff warned that to improve the performance of parts of a system separately will not necessarily improve the performance of the whole but may cause harm. He further stated that because problems are holistic in nature, the best way to solve an issue is to dissolve the quandary.

Austrian biologist Karl Ludwig von Bertalanffy developed the general systems theory, which consists of universally applicable principles (Drack & Schwarz, 2010).

von Bertalanffy introduced systems theory while leading a roundtable dialogue in 1937 at the University of Chicago and again in a 1949 German journal (Drack & Schwarz, 2010). The theory was a good choice for this study because I examined relationship changes between multiple variables similar to what von Bertalanffy used to study relationships between numerous components and events. In support of the theory, years after von Bertalanffy extended the thought, Lotifi Zadeh, an electrical engineer at Columbia University, promoted it, finding that the systems theory provided an internally stable basis for classifying and assessing the world by delivering scholarly methods of evaluating circumstance (Hammond, 2003).

Clemens (2009) and Senge et al. (2010) declared systems theory as the discipline of interrelationships, not of individual parts and patterns of change. Educator, professor, Skyttner (2005) noted that the systems way of thinking prevents the fragmentation of knowledge and isolation of specialist while discovering new approaches to problems created by earlier solutions. Economist, educator, and systems scientist Kenneth Ewart Boulding alleged that the world is a complex system, and if society is not careful, things will be made worse with the intent of making them better (Hammond, 2003).

Hammond (2003) described von Bertalanffy as the father of general systems theory and an outspoken critic of mechanistic science. According to Hammond, von Bertalanffy described the general systems theory as a humanistic approach in contrast to the dehumanizing orientation of the technological and managerial applications of systems models. He recounted how von Bertalanffy's initial efforts in general systems theory were articulated using differential equations that describe a change in one variable relative to a change in other variables to equations that were commonly used to describe the behavior of complex systems. He also spoke of how Bertalanffy distinguished between the radical implications of systems philosophy, rethinking traditional conceptions of ontology and epistemology, and the applications of systems technology that are geared to resolving realistic industrial problems without dissembling basic theory. von Bertalanffy (1968, as cited in Hammond, 2003) suggested that contemporary developments in areas such as topology, set theory, and factor analysis allow formal descriptions of complex phenomena that were not previously quantifiable in the traditional sagacity

The systems theory correlates to this study in that it concerns the capacity of wholeness as it relates to variable change. The theory relates to the RQs in that the examination of linkages of components is a major concern. Also, with the added knowledge of von Bertalanffy's humanistic belief in contrast to the dehumanizing orientation of the technical managerial application of system models (Hammond, 2003) further confers the importance of system thinking in the effort to understand the research problem.

Similarity to von Bertalanffy's humanistic belief, the human capital theory focuses on the human factor in performance management. According to Germon et al. (2011), Theodore Schultz first developed the human capital theory and Gary Becker made it prominent (see also Alasadi & Al Sabbagh, 2015). In relation to this study, in his 1958 manuscript, *The Emerging Economic Scene and Its Relation to High School Education*, Schultz was the first to make the connection between learning and productivity (Kern, 2009). According to Schultz (1961), human capital consists of the direct investments in education, on-the-job training, good health, migration, and other factors that increase individual productivity and earnings. Schultz's (1961) article was the precursor to the term *human capital*. He published the first article that proclaimed knowledge and skills as forms of worth, defining human capital as a set of knowledge, skills, and abilities that reside within as an individual (Vidotto et al., 2017).

In their study, Fairlie and Robb (2007) examined the effects of human capital and family business. Even though they did not attempt to correlate the variables of their study, there were indicators of a relationship. The human capital theory's illumination of the stark reality of learning, knowledge, and skills being related to human performance supports this research idea that financial illiteracy does correlate to minority business failure in some capacity. Becker (1994), an American economist and professor of economics and sociology at the University of Chicago, was also a devoted contributor to the field of human capital. He held a firm belief that the investment in education and training is the most valuable human capital investment of any organization. His research showed the link between human capital and advanced system design and efficiency in processes. Becker noted that the concept of human capital remains suspect within academic circles that believe exploitation of labor is the cure for social problems. He also asserted that the systematic application of scientific knowledge to produce goods increase the value of both formal and on-the-job training and education. Further contributing to the advancement of human capital theory, in his 1964 publication *Human Capital* he indicated that all wealth is not tangible, advocating that education, medical care expenses, and morals are human capital investment costs because they increase income and improve health. He notes that wages for college graduates was 65% above that of high school graduates with no college in the 1980s and 75% by 1997 (Becker, 2008). While continuing to examine the effects of human capital in the United States, Becker noticed differences of impact among ethnic groups. He saw that small families invested more in education for their children than larger families. In particular, he noted that Jews, Japanese, and Chinese usually have small families whereas minorities such as Mexicans, Puerto Ricans, and African Americans most often have large families and are less educated.

Vidotto et al.'s (2017) study on the human capital measurement scale found that there are a significant number of academic publications in human capital and few measuring instruments. The objective of the team research was to develop a holistic way to measure human capital competence, attitudes, skills, leadership, and organizational memory. The study used survey sampling from 220 financial institution managers, existing measurement models, a newly developed scale, and a questionnaire applied to a well-known financial institution. The research finding resulted in the emergence of a new more universal measurement scale consisting of 13 variables of human capital that projected an autonomous focus on knowledge through three defined factor groups; leadership and motivation; qualifications and satisfaction, and creativity. The team suggested that practical implications would be to test the new scale on other subjects, such as banks, and organizations to obtain generalization. The study contributes to the field of organizational management as an extension of knowledge to fill the gap in human capital measurement tools.

Keats and Bracker (1988) framed their conceptual model; small firm performance on the premise of current thought in strategy, entrepreneurship, and organization theory. The model was grounded in the theoretical orientation of the strategic choice perspective focusing on the conduct and performance of the individual firm. The model assumed that the entrepreneurial intensity, owner motivation, and perceived ability to control his operating environment will exert a disproportionate influence on the small business conduct and performance outcome.

Gaskill et al. (1993) conversed that the Keats and Bracker (1988) model was designed to provide a basis for explaining how owner characteristics and behaviors relate to small firm performance. And according to Gadenne (1998), the performance model suggested that antecedent factors form management strategies. For this study, the Keats and Bracker prediction model provides a theoretical foundation for the development of testable hypotheses.

Lussier's (1995) success versus failure (S/F) prediction model is a non-financial generic model for small businesses. The research on business success versus failure was launched by his need to understand better why some succeed and others fail. The study examined and hypothesized 15 factors identified from previous business success/failure studies. The model was designed to determine which variables were most important to success and failure (Lussier & Halabi, 2010).

In 1998, Senior Accounting professor, David Gadenne proposed a model of small business success and the study of critical success factors for small businesses. He examined various management techniques and business strategies that directly affect financial performance using managerial construct. The research considered the effect of owner-manager personal characteristics and business objectives on successful management practices that associate with small business performance (Gadenne, 1998). Gadenne's study results showed that different management practices similar to those of this study are connected to small firm performance. The findings ultimately imply that performance and cash may be negatively linked to financial leverage and capital investment.

Literature Review

For more than a decade, financial literacy has been a high-priority topic in the financial services industry (Wright, 2016). There are many studies that show financial illiteracy is significantly high and small business ownership is despairingly low among the American minority population (Cerarini et al., 2010; Elan & Goodrich, 2011; Lusardi, 2005, 2011; Mandell, 2004). There is also a great deal of continuous research dedicated to why financial literacy is low and business failure is high, but none that directly correlate financial illiteracy with minority small business failure. And too, there is ongoing empirical research that compares financial literacy traits among people of different demographics, such as high and low income, age, ethnicity, and country of residence (Wessel, 2013).

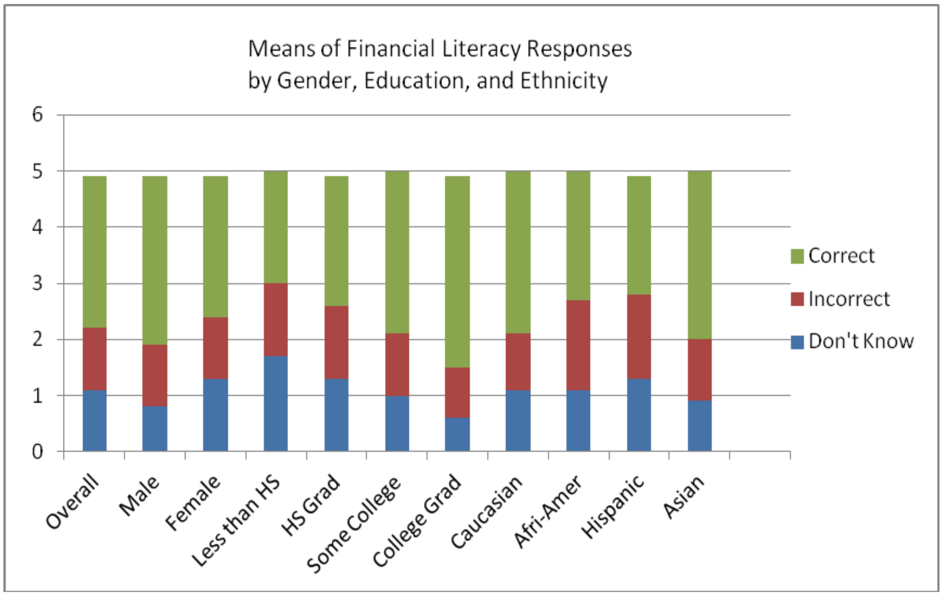
The 2009 NFCS published in 2012 National Bureau of Economic Research working papers (Hastings et al., 2013) showed that a majority of people, even those with a household income of more than $150,000 failed to answer correctly five fundamental financial concept questions. These actions proved that a lack of understanding of fundamental money management concepts is not limited to low-income or undereducated consumers, further confirming the fact that most Americans lack necessary financial literacy skills (Wessel, 2013).

In a 2009 session with the U.S. Department of the Treasury and President Bush Advisory Council on Financial Literacy, the FINRA Investor Education Foundation commissioned the first national study of the financial capability of American adults (See Figure 1). As of 2015, the ongoing research found that less than a third of American adult consumers have access to financial education in school, college, or the workplace (FINRA Investor Education Foundation, 2016).

The Jump$tart Coalition study survey of Americas’ youth consumer knowledge on financial literacy revealed a considerable lack of understanding of necessary funds concepts, principles, and practices (Harnisch, 2010). Despite growing evidence that well designed and implemented high school personal finance mandates help prepare young people to successfully navigate their financial lives (Brown et al., 2014) only 17 states in North America require high school students to take a course in personal finance (Council for Economic Education, 2016).

Figure 1

Means of Financial Literacy Responses



In a 2006 financial education study, OECD found that levels of financial literacy are low not just in the United States but in most countries. In the OECD international study measuring the financial proficiency of 15-year-olds in 18 countries, U.S. students scored between 8th and 12th on the scale that showed students failed credit card management and retirement saving examination (Norman, 2010; OECD, 2005c). Additionally, on the OECD 2012 Program for International Student Assessment, assessing financial knowledge and skills through problem-solving, one-fifth of the students failed to show the capability of more than necessary financial awareness (OECD, 2014). According to Wright (2016), the low skill finding should not be surprising being that only 20% of U.S. adult participants of the 2014 American College Retirement Income Literacy survey received a passing score.

The Office of Investor Education and Advocacy (OIEA) study in response to the Consumer Protection and Dodd-Frank Acts signed by President Barack Obama required the committee to identify the existing level of financial literacy of retail investors and to develop methods to increase funds knowledge and relevant information necessary to make informed business decisions (U.S. Securities and Exchange Commission, 2012). The study covered issues of financial literacy and mediated investor education. The OIEA solicited the assistance of several sources (i.e., the Library of Congress report on financial literacy; several qualitative research focal groups, quantitative online surveys, and a cross-divisional task force) (U.S. Securities and Exchange Commission, 2012).

The OIEA study finding indicated that U.S. retail investors lack basic concepts and knowledge to avoid fraud, and the questionnaires confirmed that specific minority groups and the less educated have an even higher lack of knowledge than the average population (U.S. Securities and Exchange Commission, 2012). OIEA formulated the strategies to increase investor financial literacy and the Financial Literacy Education Commission (FLEC) which is made up of 22 federal entities and chaired by the U.S. Department of Treasury identified four content areas they believed to be valuable to improving investor behavior (U.S. Securities and Exchange Commission, 2012).

Other notable outcomes from the OIEA study were the creation of the Consumer Financial Protection Bureau (Gaskill et al., 1993) which directly serves consumers and special populations. The Commodity Future Trading Commission, a customer protection agency that funds education initiatives, whistleblower awards, and focuses on fraud prevention and Commodity Exchange Act violations was devised. The addition of two entities to the FLEC and a national literacy strategy were made. The Federal Emergency Management Agency and the Office of the Trustee for Native Americans became a part of the FLEC and the 2016 Promoting Financial Success in the United States: a national strategy for financial literacy was implemented (Financial Literacy and Education Commission 2016).

To fill the research gap in financial debt literacy, the empirical work of Lusardi and Tufano (2015) builds upon previous literature by partnering with Taylor Nelson Sofres (TNS) Global commercial market research firm. Together they designed and field a survey that focused on debt literacy to measure knowledge of concepts related to debt. The team also proposed a method that uses a set of financial experiences to calculate and estimate the cost of unnecessary fees and payments on credit cards and compounding interest debt. The team distributed the survey to 1,000 U.S. residents via phone interview addressing credit card debt, knowledge of interest compounding, and payment preferences. The study findings revealed stunningly low levels of debt literacy throughout America, showing that one third of the participants did not understand the necessary working of credit cards (Lusardi & Tufano, 2015). The study also substantiated that debt illiteracy is severe in minority populations which in turn explain specific financial behaviors such as fee payers (i.e., a consumer who is making minimum payments on credit card bills) and alternative financial services users (e.g., users of sources such as payday and title loans) (Lusardi & Tufano, 2015). The findings also showed that one third of the extra fees being paid by cardholders were individuals who were less financially knowledgeable rather than observable demographic factors, links between debt literacy and over-indebtedness (Lusardi & Tufano, 2015).

New and growing research shows evidence of prevalent funds management illiteracy in the U.S. population, particularly among groups such as the less educated, women, and minorities (Lusardi & Mitchell, 2009). Studies have recently begun to document the significant demographic and geographic variations of financial literacy, finding that the problem is unusually high among women, least educated, African-Americans, and Hispanics demographic groups (Bumcrot et al., 2013).

In their study of debt literacy, Lusardi and Tufano (2015) found that debt illiteracy is severe in minority populations, explaining why a large number of them exhibit specific financial behaviors such as balance carry over on credit card, little to no saving, high-interest fee payments, and patronizing alternative financial services. To further illuminate the problem, Harnisch (2010) in his perspective, *Boosting Financial Literacy in America*, shows that economic illiteracy is high throughout the U.S. and disproportionately elevated in individuals without postsecondary education, low-income, Hispanic, and African American populations. The research also found several additional disturbing issues; financial literacy tends to vary with age and gender, men tend to be more literate than women, and that new sophisticated financial products are raising concern among low-income and minority populations (Harnisch, 2010).

As indicated earlier in this review, minorities are more likely not to receive adequate financial education is in complete agreement with Lusardi and Mitchell (2007c) study showing that financial literacy is high among individuals who get introduced to economic studies and business education. According to Mandell (2008) there is a positive correlation between financial literacy, gender, race, and educational achievement levels (Lusardi & Mitchell, 2009). When geographically acknowledging U.S. economic illiteracy status, Bumcrot et al. (2013) identified that the states with high literacy rates are concentrated in the northern states while a significant number of much less financial literate minority populations reside in the southeastern states (see Table 1).

Table 1

States with Highest and Lowest Financial Literacy

Rank	State	Financial Literacy Index Score	Rank	State	Financial Literacy Index Score
1	New Hampshire	3.30	51	Louisiana	2.75
2	Minnesota	3.28	50	West Virginia	2.83
3	South Dakota	3.27	49	Kentucky	2.84
4	Idaho	3.19	48	Arkansas	2.85
5	Vermont	3.17	47	Tennessee	2.86
	US Average	2.99		US Average	2.99

States with Highest and Lowest Financial Literacy (Bumcrot et al., 2013)

To further expose minority financial literacy disparities, the 2009 Jump$tart survey revealed that minority populations; specifically, Hispanic and African American scores were lower than non-minority participants with 83% and 89%, respectively, failing the financial literacy test (Harnisch, 2010).

To reiterate the state of minority literacy Theodore Daniels, founder and president of The Society for Financial Education and Professional Development noted that the condition of the minority community should not limit their ability to acquire the financial knowledge needed to grow wealth (Daniels, 2011). He further emphasized that for many reasons, African Americans inherently lack understanding of personal money management concepts which lead to behaviors such as high debt delinquencies, little savings, and lower homeowner rates. Daniels hypothesized that minority wealth inequality will be diminished only through literacy, and that the attainment of financial knowledge will never remove barriers such as discrimination in the market (Daniels, 2011).

Academic research and popular literature often suggest that the primary reasons for small business failure are poor financial planning and management. To reiterate the thought, Mason (2008) cited that small business failure results from a lack of proficiency in management skills and lack of proper financing. Smythe (2007) without equivocation suggested that the lack of start-up capital caused by financial unpreparedness is a major problem that most small businesses encounter (Dunn & Liang, 2011). And Clark (1997, as cited by Dunn & Liang, 2011) contended that money is one factor that must be planned appropriately.

Historically, small business ownership was not as complicated; entrepreneurs tended to have relatively low levels of education, fathers who were farmers or laborers, and individuals who had difficult childhood circumstances (Collins & Moore, 1970; Strang, 1971). Thereby, business failure may not have been considered a major life-changing event as do today. Research shows that small businesses fail not only because of factors beyond their owners but also because of their mistakes (Abdelsamad & Kindling, 1978).

Per Strang (1971), before evaluating the causes of minority business failures, it is first necessary to determine the criteria to be used for success. In his study of minority economic development and the problems of business failure, he found that although businesses fail for many reasons, the prevailing belief is that the owner-manager ability to resolve problems is the key to enterprise success. The study findings indicated that the most frequent causes of minority business failures were consistent with those of Dun & Bradstreet (1999) (i.e., the lack of managerial ability, business education, and experience) (see Table 2).

Table 2

Reasons for Failure

	Percentage of Firms Mentioning			
Reason	Retail	Service	Other	Total
Lack of managerial ability	57	86	67	70
Lack of business education and experience	86	43	67	65
Lack of formal controls and planning	86	43	50	60
Insufficient cash flow or inadequate capital	43	43	83	55
Inadequate marketing effort	43	57	33	45
Inadequate capital at inception of business	29	43	50	40
Employee lack of experience, lack of skills	14	43	50	35
Lack of experience in a particular line of business	43	--	33	25
False attitudes toward business	14	43	50	25
Inventory mismanagement, poor buying practices	71	--	16	30
Inadequate management counseling	--	--	67	20
Lack of motivation	14	29	--	15
Poor credit management	--	29	--	10
Lack of market potential	14	14	--	10
Other	28	--	17	15

Source: Bureau of Business Research and Service, University of Wisconsin, Survey of Minority Enterprise Consulting Organizations (Sept. 1970), (Strang, 1971).

Tate (2009) explained business failure in a different but systematic manner. Tate indicated that an organization can suffer a systemic failure when the whole system or after higher levels break down between and within the firm elements that need to work together for overall success. He identified factors such as confused goals, failed system-wide understanding, flawed design, individual goals, inadequate feedback, poor cooperation, lack of accountability, etc. Fairlie and Robb (2007) found that minority business failure can also be contributed partly to owner characteristics of start-up inefficiencies, disadvantaged family backgrounds, and less education (National Poverty Center Policy, 2008). Brimmer (1966, as cited in Bates, 2011) as a member on the Board of Governors of the Federal Reserve System concluded that minority-owned firms most often lacked the managerial and technical competence needed to compete successfully in the business world.

Lussier et al. (1996) developed their generic non-financial business success versus failure (S/F) prediction model for entrepreneurs with 0-10 employees using stepwise discriminator analysis upon recognizing that prior empirical studies of small business failure and prediction models focused primarily on financial ratio data and managerial variables. The researchers used the Dun & Bradstreet definition that considers a business a failure if the firm is involved in court proceedings or participated in actions that contribute to the loss of creditors (Dun & Bradstreet, 1999). The study used the full model variables obtained from past studies of success versus failure. Using questionnaires, the research sampled 96 pair firms from six states: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The industry mix was agriculture, construction, finance, manufacturing, retailing, wholesale, transportation and communication, and services.

The researchers used the discriminator function analysis to predict group membership, and the stepwise procedure was run on all variables to identify those that did or did not distinguish success versus failure. Only 10 of the 15 variables were significant predictors of success or failure, and management was not one of them. The elimination of the non-discriminatory variables results created the prediction model foundation. The model accurately predicted 75% of the surveyed firms' success or failure fate. The model is believed to predict a business as successful or failed more accurately than business or industry classification over 99% of the time (model p = .0006). The significant (S/F) predictor variables used were capital, record keeping and financial control, industry experience and planning, professional advisors and education, staffing and economic timing, parent business owner, and minority ownership. Lussier et al. (1996) proclaimed that the research would be of great benefit to entrepreneurs to assess the probability of success or failure beforehand. The team believed that by using the predictor investors could avoid doing business with high probability failure organizations, and suppliers could make informed credit decisions. Additionally, Lussier et al. (1996) thought that the model would be good for educators and consultants assisting with outreach program design, and public policymakers creating legislature that support failure prevention.

In 1969 there were only 45,000 minority-owned businesses out of 5,000,000 in America (Strang, 1971). And even though there were eight million minority owned businesses in the United States in 2012, due to disparities, the population continued to be under representation in comparison to populace share (McManus, 2016).

There is limited research available concerning the effects of financial illiteracy on the performance of minority businesses. Scholars studying minority entrepreneurship have relied on small non-representative firm samples and business owner interviews from a couple of locations. Other scholarly literature analyzing minority entrepreneurship lack a single focus and is quite confusing regarding issues examined and the research approaches (Bates, 2011).

According to Bates (2011), the uniqueness of minority businesses is exemplified by barriers that they must overcome for success to be recognized. Trying to acquire the appropriate educational credentials, skills, and applicable work experience, financial capital, and market exploitation of opportunities have been customarily more challenging for minorities than for non-minority entrepreneurs (Bates, 2011). Bates further noted that the barriers often force owners to be concentrated in small, less profitable, and less sustainable personal services and retail businesses such as barbershops, small restaurants, and mom-pop retail stores, and many times, the barriers discourage aspiring minority entrepreneurs (Bates, 2011).

Even though it is a challenge to obtain, cross-sectional data reviews show minority business progress is rooted in the human capital gains of the owners. And although the amount of expertise and market access among minorities has grown, and financial capital availability has expanded in recent decades (Bates, 2011), the current scholarly consensus on minority access to human and financial capital resources, and client accessibility show a continuous lag behind non-minority small-business owners (Bates, 2011).

Individuals pursue business ownership for an assortment of reasons (Zanakis et al., 2012). Although minorities have different start-up motivations and growth intentions (Edelman et al., 2010), they typically have lower small business success rates (Sullivan, 2007). Often due to inadequate education or insufficient financial resources minorities become necessity entrepreneurs; an individual that initiates a trade for survival (Poschke, 2013). Many times, unemployment or underemployment tend to be the primary reasons minority workers start businesses, in the effort to gain income for daily survival (Zanakis et al., 2012). When a person starts a business as a desperate response to unemployment, with no sound principles or experience it is sure to fail (Beaver, 2003).

Although many minorities may or may not be financially literate, and business starting capital is usually personal savings, or relative borrowings (Njoroge, 2013). After an analysis of the 2012 survey data of business owners, regulatory economist Michael McManus, called to mind how minority-owned businesses despite customary setbacks of weak sales and unemployment helped keep the U.S. economy alive during the recession (McManus, 2016). Additionally, McManus (2016) noticed that while the number of minority businesses has increased, sadly, most are dependent on money lenders and debt traps such as high-interest credit cards and alternative funding. He also recognized other disparities such as the organizations disproportionately employ 30% less than non-minority businesses and 58% of African Americans, 44.5% Hispanic-owned, 43.3% Native American businesses are concentrated in the lowest sales industries, such as childcare, taxi service, and so forth.

In his study of 298 minority businesses in the United States from 1997-2001, Lowery (2005) learned that in 2001 the U.S. minority population was 32% of the total population and 15.1% of business owners; Hispanics owned 40.2%, Asian 28.1%, Blacks 28%, and American Indians 6.7%. He also found that in proportion to population growth minority-owned establishments had lower survival rates than non-minority-owned businesses. During this time, the survival rates for Asian and Pacific Islander-owned establishments were 72.1%, while Hispanics 68.6%, Native American and Native Alaskans 67%, and Blacks owned 61%. The study was vastly informative but had two significant limitations factors (i.e., the information was collected from employer businesses which are small in number for minorities instead of firms, and it only tracked companies established in 1997, and no start-ups were considered) (Lowery, 2005).

Literature indicates that current minority business owners share some demographic characteristics that are like the features of former minority business owners but considerably different from non-minority entrepreneurs (Bewaji et al., 2015). Prior and current research has made known that minority small business owners are commonly from lower- or middle-class families; young, married, and inexperienced when they engaged in new business activities. Also, many have a college degree and are mainly driven by needs for achievement and the lack of previous job satisfaction

(Bewaji et al., 2015; Hisrich & Brush, 1986). For those reasons they make different investment decisions in human capital than non-minority business owners (Parker & van Praag, 2012).

In their examination of factors associated with business success and causes of racial disparities in minority business closure rates, profits, employment, and sales, Professor of Economic and Research Associates Fairlie and Robb (2007) examined financial capital, family business, and human capital. They found that low levels of education, lack of work experience in family business contribute to adverse outcomes for minority-owned businesses. The researchers also discovered that minority owners are typically at a disadvantage when referencing business background and even though racial inequality in education, income, and wealth is well known, it is less understood in the pronounced racial disparities in business ownership and performance (Fairlie & Robb, 2007). For instance, the average annual sales for non-minority businesses in the United States are approximately $439,579, whereas those of minorities are only $74,018, and due to restricted access to business financial and human capital, only 12.6% of minority business owners have prior experience in comparison to 23.3% of non-minority owners (National Poverty Center, 2008). Additionally, business success is often determined by start-up capital whereas the personal wealth of minorities is typically low, an average of $6,000 total household; another indicator that they will more than likely face lending discrimination (National Poverty Center, 2008). Also, where only one-fourth of minority business owners are college-educated there is a proven relationship between owner education levels and business performance (National Poverty Center, 2008).

Lofstrom and Bates (2011) disagreed with the consensus view, that personal wealth holdings have real explanatory power for predicting entry into low-barrier business industries. After examining causes of black/white gaps in self-employment entry rates in the United States, they recognized that industry background impacts owner resource endowments on the possibility of successful entry and acknowledged that barriers to entry are higher in some lines of business than in others. The team proceeded by separating self-employment entry into subgroups of high and low-barrier industries. Lofstrom and Bates' study findings demonstrated, as did others, that higher educational attainment is a predictor of entry into high-barrier fields, but not into low barrier sectors. Also, the study found that industry context does contribute heavily to entry patterns. And the one-size-fits-all econometric models often used to predict entry into self-employment are inadequate.

Mason (2008) cited that small business failure results from a lack of proficiency in management skills and lack of proper financing. Small businesses depend on human capital assets such as strategy, skill, and psychology to develop a holistic framework for success (Ployhart et al., 2014). Therefore, human capital is necessary for business success, and individuals must have the skills required to be productive (Koyagialo, 2016; Ployhart et al., 2014).

The social capital theory investigates the importance of relationships and how they facilitate action (Hibbler-Britt & Sussan, 2015). The theory is a non-monetary resource that is rooted in relationships that extend outside of the organization and includes those with customers, suppliers, and other external agencies (Chrisholm & Nielson, 2009; Hibbler-Britt & Sussan, 2015). The struggle to obtain formal bank capital has long been a problem for small business owners and has proven to be a significant contributor to minority business failure. Business owners who are social build relationships with external organizations and lenders creating a better chance of getting access to the formal capital market (Santikian, 2014). Social capital itself is a resource that is instrumental in profitability and competitiveness (Chrisholm & Nielson, 2009; Hibbler-Britt & Sussan, 2015).

Leyden et al. (2014) found that social networks are critical in business progression, innovation, and the likelihood of success (Huang et al., 2013). Huang et al. (2013) data review of 14 countries' early-stage entrepreneurial activities substantiated demographics such as gender, age, income, and education have a significant impact on the usage of social networking in business growth efforts (Hibbler-Britt & Sussan, 2015). To further support the hypothesis, the research findings from a sample of 187 companies (Li et al., 2013) also revealed that social capital networks help entrepreneurs obtain outside organization connectivity to scarce resources that would have not otherwise been accessible.

Research shows that the majority of small businesses begin as a single employee endeavor with survival depending upon the inclusion, and involvement of others (Aldrich & Kim, 2007; Hibbler-Britt & Sussan, 2015; Huang et al., 2013). The exclusion theory explores the reasons why some people are non-participants in formal banking institutions. There have been many studies on exclusion and the effects on low-income minorities. Caskey (1994) identified declining income and bank closures in lower-income neighborhoods as an explanation for minority financial exclusion and increase reliance on informal banking systems. His thoughts questioned the validity of a recent U.S. study on funding institutions practices that believe financial exclusion may be reduced if people open a bank account in their youth (Friedline & Rauktis, 2014; Huang et al., 2015).

In an examination of geographic, and economic marginalization, Dymski and Li (2003) also found that in the United States financial exclusion most often affects the lower-income and minority via unequal access to banking and capital accumulations; leaving the transactional need to be accomplished by high-cost informal fringe banks. Additionally, Squires and Vėlez's (1996) analysis of mortgage loan distributions in the Midwest United States, found that communities with substantial populations of African-Americans and Latino residents were more likely to be denied access to mortgage finance, thereby limiting business and homeownership (Huang et al., 2015). The exclusion theory underpins this study by aiding in showing how the minority struggle for success is often experienced in slight and various other forms.

The signaling theory presumes that capital market intelligence exchange determines how funds flow between an enterprise and the market (Mole & Namusonge, 2016; Whonderr-Arthur, 2009). Keasey et al. (1992, as cited by Whonderr-Arthur, 2009) noted that for minority small businesses to signal their value to potential investors, they must disclose information such as earnings forecast, retained owner equity, and profit.

Nasser and Nuseibeh's (2003) study on annual report usefulness revealed the individuals most often rely on first-hand information to make decisions; making financial education pertinent to people who manage money. Because minority business owners often do not have good record-keeping sources or systems (Norman, 2010) this study illustrated how signaling as a component of financial management negatively impacts their success.

The pecking order theory is a monetary theory that assumes management rather not release capital information but prefers to finance first from retained earnings, then secondly with debt, followed by hybrid forms, and as a last resort, using externally issued equity with bank and agency cost (Whonderr-Arthur, 2009). In his pecking order research, Norton's (1991) study found that 75% of small businesses made financial configuration decisions using the pecking-order framework (Whonderr-Arthur, 2009). Holmes and Kent (1991) also agreed that the framework is preferable with small businesses mainly because most are owner-managed and do not want to relinquish their ownership (Whonderr-Arthur, 2009). Thus, the pecking order becomes the normal, appearing to be an unpreventable form of self-exclusion that leads to entrepreneur hardship and possible business closure.

The positioning theory is an original marketing thought with founding concepts that arose from Davies and Harre (1990) and Harre (1991). The thought originated in the marketing field as a communication strategy that allowed certain products to be placed in a market (Tirado & Galvez, 2007). Harre and Van Langenhove (1999) referred to positioning as an idea portrayed by accepting positions as relation processes that are built on interaction and negotiation with other people (Tirado & Galvez, 2007).

Downing (2005) cited the theory as the basis for imitation of behaviors such as cultural norms and priorities of others to aging inclusion. Tirado and Galvez (2007) described positioning as the actions in which people find themselves bound by their interaction with a system of rights and responsibilities of possibilities and nonsense. The positioning theory supports this study by highlighting how minority business owners are negatively affected by positioning due to their lack of certain skills, knowledge, and experiences.

Helping Agencies

There is present evidence that shows when appropriately matched to the specific needs; financial education can have a significant and profound impact on behavior and security (Lusardi & Mitchell, 2009). Therefore, it is imperative to give them the essential tools, provide specific instructions and advice for making financial decisions (Lusardi & Mitchell, 2009).

The field of financial education has evolved considerably over the past decade. Researchers aimed to identify the educational approaches that are most helpful and to understand which best match different consumer situations. Practitioners have learned from trials that it is best to focus beyond the provision of the traditional scope of financial literacy and education instead of emphasizing a broader view of economic capability (Financial Literacy and Education Commission, 2016).

Rule of thumb-based financial education simplifies guidelines that support funds managing behavioral outcomes by providing easy-to-remember, simple, and actionable guidance on financial decisions and actions (Drexler et al., 2014). Even if this is true, we must remember that financial education can complement but never replace policy, such as consumer protection and regulation of financial institutions access by minorities, and low-income consumers (Norman, 2010).

Americas' financial professionals are aware that its citizens have limited financial knowledge (Wright, 2016). In response to the illiteracy levels, many studies have attempted to identify the financial problems of consumers with limited financial capabilities to determine their financial education need (Jariah et al., 2004; Lyons & Chang, 2007; Xiao et al., 2004).

Government agencies, companies, non-governmental organizations (NGOs), and concerned citizens are undertaking the challenge to change financial behaviors (Wessel, 2013). Many have gotten involved in the quest to eliminate financial illiteracy in the United States. Organizations such as the National Endowment for Financial Education, High School Financial Planning Program, the Jump$tart Coalition for Personal Financial Literacy, and the Federal Deposit Insurance Corporation are providing free educational materials and services to individuals, families, and communities.

Flore-Anne Messy, a senior expert on financial education and executive secretary of the International Network on Financial Education works with partners to develop methodologies for measuring the financial literacy of a population. The goal of the program is to help people adopt healthy, informed financial habits (Wessel, 2013). The Society for Financial Education and Professional Development is a nonprofit founded in 1998 by Theodore R Daniels. The association's mission is to increase the level of economic literacy of individuals, households, and to promote professional development at the early stages of career development through mid-level management.

The Office of Advocacy of the U.S. SBA was established by Congress in 1976. The administration is an independent representation of small businesses within the federal government. The Chief Counsel for Advocacy, who is appointed by the president and confirmed by the Senate, directs the operations of the office. The chief counsel presents the views, concerns, and interests of small businesses before Congress, and other federal organizations such as the white house, governmental agencies, federal courts, and state policymakers (U.S. Small Business Administration Office of Advocacy, 2021). The advocacy economic research policy analyses and small business outreach help identify issues of concern. Regional assigned advocates and the office in Washington, D.C., support the chief counsel efforts (U.S. Small Business Administration Office of Advocacy, 2021).

The NFEC is a social enterprise that is committed to creating a world where people are knowledgeable, informed, and qualified to make sound financial decisions that improve their lives, and the lives of people they impact around the globe (NFEC, 2020). The council provides financial education workshops and funding resources for individuals and community programs. Additionally, the council provides presentations, lesson plans, student guides, guidebooks, parent tip guides, community awareness articles, and other information to offer people access to useful financial literacy materials (NFEC, 2020).

The Financial EduNation Campaign is an extension of the NFEC that also provides resources to organizations that they serve. Qualified operations receive training assistance and resources to deliver comprehensive business awareness (NFEC, 2020). The campaign takes a holistic approach to improve financial capability in the effort to extinguish the problems of economic illiteracy. The group designed the study materials around a plan that targets both participants and their influencers to develop financial literacy goals (NFEC, 2020). The idea of combining complimentary financial literacy resources with a high-profile awareness campaign increases exposure while providing broad practical financial education. The Financial EduNation Resource Center also offers free personal finance programs to individuals, schools, nonprofit organizations, and the community (NFEC, 2020).

The International Network on Financial Education is a sub-entity of the OECD that provides a policy forum for exchanging views and experiences on financial education. The network works with over 119 countries and 240 public institutions (International Network on Financial Education, 2020). The organization compiles an extensive repository of studies on financial literacy and holds conferences worldwide as part of efforts to develop indicators and define best practices for financial education (International Network on Financial Education, 2020).

The Financial Literacy Research Consortium is an association of organizations to perform research. The group has started important research on consumer financial behavior that includes evaluations of the effectiveness of interventions as an effort to improve financial literacy. Additionally, the organization supports ongoing research projects related to financial education, decision-making, and money management (Financial Literacy and Education Commission, 2016).

The Financial Literacy and Education Commission (FLEC) formation was motivated by Title V of the Fair and Accurate Credit Transactions Act of 2003. The program was designed to improve financial literacy in the United States (Financial Literacy and Education Commission, 2016). The organization presently consists of 23 federal government entities and chaired by the U.S. Department of the Treasury. The FLEC developed its first national strategy in 2006 and recently released, "*Promoting Financial Success in the United States*" (Figure 2) (Financial Literacy and Education Commission, 2016). The group research, "National Strategy for Financial Literacy 2011" was a strategic framework focused on increasing awareness and access to adequate financial education, determining and integrating core financial competencies, improving financial education infrastructure of identifying, enhancing, and sharing useful practices (Financial Literacy and Education Commission, 2016). FLEC plays a central role in the federal government efforts to improve financial literacy, financial capability, and individual financial well-being. The organization also coordinates various financial education activities for American families, students, service members, and their families, and financially vulnerable populations (Financial Literacy and Education Commission, 2016). Additionally, the FLEC provides a platform for member agencies to collaborate and share their approaches, ideas, research findings, and experiences that influence financial education policies and practices. Through FLEC efforts, federal financial education support and services are made more efficient and coordinated (Financial Literacy and Education Commission, 2016).

The financial Education Resource Center provides research on financial education and financial access that include elementary student and low-income adults. Future initiatives will consist of efforts to improve financial education infrastructure by focusing on programs that serve vulnerable youth such as the youth employment training components, preparing students for post-secondary education and how to make financially sound decisions, and workplace financial education (Financial Literacy and Education Commission, 2016).

Ultimately, the FLEC believes that to be most effective, financial educators must have a clear understanding of the participants' needs, goals, and challenges. Managers of financial capability programs must be competent, and interventions must be designed and marketed with an explicit understanding of the actual problems that are blocking participants' achievement of their financial objectives. In addition, opportunities to access appropriate financial products and services must be made available (Financial Literacy and Education Commission, 2016).

Summary and Conclusions

The summarized research for this study suggests that building financial independence can be accomplished through equipping consumers with knowledge, skills, assistance initiating developed plans, and ensuring a clear understanding of how to make financial products and services options work for them (Financial Literacy and Education Commission, 2016).

This quantitative correlational study analyzed the association between financial illiteracy and minority small business failure. There are, but a few studies in the United States completed with a sole minority financial focus and even fewer on minority financial literacy and small business failure. Therefore, this chapter reviewed literature that was relevant to the independent variable; financial illiteracy, and the dependent variable; minority small business failure. Past research on similar studies has typically analyzed and concentrated on the reasons for disparities, failures, and/or the obstacles to success, not the relationship. In this review, the researched literature covered the theories and concepts that define and create financial literacy, and business management knowledge. The review is a compilation background and foundation of the literary theme of business success via systems maintained through human capital attainment. The assessment further showed how exclusion creates a systematic inability and barriers to minorities' access to human and financial capital and other resources. Additionally, the literature illustrated how a system breakdown can become a toxin to entrepreneurs, and cause business failure.

The majority of the literature in the review supports the evidence that there are many causes of financial illiteracy and minority small business failure. The review illustrates, how systematic concepts such as social capital, exclusion, signaling, pecking order, and positioning has significantly impacted minority entrepreneurs' ability to attain resources such as formal banking access, education and training, and managerial experience that positively promote financial literacy and small business success (Strang, 1971).

There are presently ongoing research and work efforts, albeit not in abundance by individuals and organizations seeking solutions to the problem(s) this study presents. President's Advisory Committee on Financial Literacy (PACFL) identified school, workplace, and community as literature sources from which Americans can benefit (White House, 2012). And the PACFL recommends that financial education be a mandatory part of curriculums in all schools with grades kindergarten through 12 (PACFL, 2008).

The lack of research that relates to the correlation of financial illiteracy and minority small business failure is the gap in literature that this study will help fill. This study focused on extending the knowledge and adding to the broader research of financial education, training, and inclusion concerning financial literacy, and business concepts that can create minority small business success. The review is a continuance of past and current studies. This research subject is significantly understudied and will require additional future research to provoke awareness and attract the attention of individuals who have the resources needed to make changes.

Chapter 3 of the study gives an in-depth explanation of the research design and rationale. The methodology, population characteristics, sampling, and sampling procedures for recruitment are specified. Additionally, data collection methods, instrument constructs, and details of the data analysis plan are conferred. And last, the threats of validity; external, internal, and construct are discussed.

Chapter 3: Research Method

The purpose of this study was to determine whether a quantitative correlation exists between financial illiteracy and minority small business failure in the United States. I performed an exhaustive review of secondary financial literacy and various business and management research data that relate to the ability of the U.S. minority population to create wealth through sustained entrepreneurial success. In this chapter, I explain the research design and rationale for the study. The section also includes an in-depth description of the applied methodology and data analysis plan, discussion of threats to validity, and a summary.

Research Design and Rationale

Financial illiteracy was the independent variable, and minority small business failure was the dependent variable. The identified covariate variables interest, inflation, bond pricing, and mortgage risk are financial literacy subcharacteristics. Cash, planning, financial reporting, capital structure, training-education are business managerial concepts and competencies subcharacteristics obtained from the NCFS.

I used a correlation cross-sectional design. The correlational analysis component of the design assisted in establishing the possible variable link (Prion & Haerling, 2014) in RQ1, What is the correlation between financial illiteracy and minority small business failure? By recognizing trends and patterns in the data characteristics under examination (Howick, 2013), the cross-sectional element of the design supported RQ2, What is the correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent? There was no recognized time constraint with the chosen design. However, there was an elevated possibility of resource data constraints such as coverage errors where information may have been miscalculated or reported incorrectly due to non-internet users and the mail in surveys were not returned or returned late.

I chose the correlational cross-sectional design because I wanted to quantitatively examine the relationship between variables. The correlational cross-sectional design is more often associated with quantitative research that examines relationships between properties and dispositions to establish causal or to describe the pattern of relation (Frankfort-Nachmias & Nachmias, 2008). The choice was consistent with the processes for advancing knowledge in the field of management in that the design seek to provide answers to the questions if and how does financial illiteracy affect minority small business failure.

Methodology

I used the quantitative research method to statistically examine the relationship between the variables. Use of the quantitative method allows researchers to obtain readily comparable results for replication (Goertzen, 2017; Thamhain, 2014). Qualitative research tends to focus on a specific concept or phenomenon. Mixed method studies can be lengthy and are better suited for phase research that requires extended time. Quantitative research work to advance relationships among variables. Although the quantitative method was more favorable due to numerical annotations and correlational features, both the qualitative and mixed methods were considered for the study.

Population

The target population for the study was U.S. minority residents who were also previous minority small business owners as described by the SBA. All participants in the study were adults, age 18 years and over, and residing in North America. According to 2012, 2014, and 2015 U.S. Census Bureau Annual Survey of Entrepreneurs (ASE), there were approximately 7,952,386, 949,318, and 996,248, respectively, minority-owned and surveyed businesses in the United States.

Sampling and Sampling Procedures

Random selection ensures that every sampling unit of the population has an equal probability of being included (Frankfort-Nachmias & Nachmias, 2008). Simple random sampling assigns equal and known nonzero probability of each unit being selected (Frankfort-Nachmias & Nachmias, 2008). In an effort to eliminate systematic bias in sample selection, I used simple random probability sampling to attain participant data from research reports and documents created, maintained, and distributed by U.S. governmental organizations (FINRA, the U.S. Census Bureau, and SBA). The respondent survey participants ($N = 111$) samples were randomly drawn from the 27,564 2015 participants of the NFCS financial literacy state-by-state study and the U.S. Census Bureau's 2015 ASE. In this study, ethnicity was a primary characteristic focus; therefore, the sampling frames included minority business owners (e.g., Black or African Americans, Hispanic, Asian, and other minority groups), and owner education level.

Researchers can conduct a priori analysis to determine sample size at a level of significance using G*Power (Weil et al., 2015). To obtain the recommended sample size for this study, I used G*Power 3.0.10 power analysis with a medium effect size (r =.30), α =.05, and power of .95; the software determined that 111 samples were appropriate (see Table 3 and Figure 2). The effect size was appropriate to reflect the minority small business owner population and large enough to provide a comfortable level of confidence in the study outcome.

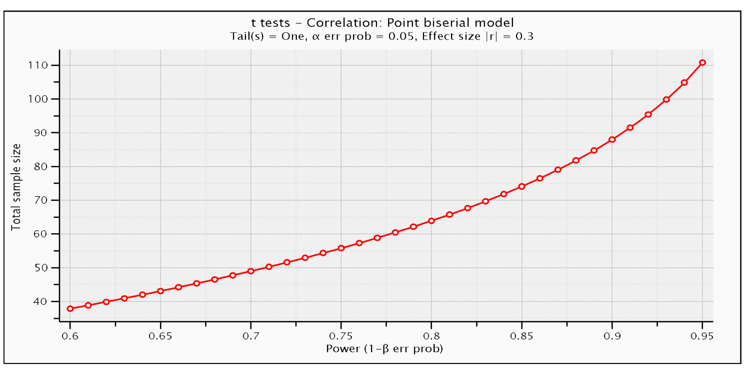
Table 3

*G*Power Sample Size Calculations*

Alpha (α)	Power (1-β)	Effect size (2)	Critical t	Sample size G*Power
0.05	0.95	0.3	1.658953	111

Figure 2

Power and Sample Size



Procedures for Recruitment, Participation, and Data Collection

This study was an examination of secondary survey data; therefore, participant recruitment was not required. All collected participant data were that of members of the minority populace as defined by the U.S. SBA. Participants were also U.S. residents and former business owners. The ASE provides information on select economic and demographic characteristics for businesses and business owners by gender, ethnicity, race, and veteran status.

Archival Data

I collected the resource data for this study from the NFCS (see Appendix A), which was funded by FINRA and performed by Applied Research & Consulting; the ASE (see Appendix B); and other reports and research performed by the U.S. Census Bureau, the Financial Literacy Annual report prepared by Consumer Finance Protection Bureau (see Appendix C), and the SBA database. For this study, informed consent, debriefing, or follow-up procedures were not necessary; however, the FINRA performed scheduled follow-up phone interviews, and the U.S. Census Bureau mailed letters to inform business owners of their legal obligation to respond to the official ASE and sent regular mailing follow-ups to non respondents (see Appendix D).

Instrumentation and Operationalization of Constructs

There were no additional data collection instruments constructed or employed for this study. The use of secondary information alleviated the need for the development of collection tools. Applied Research & Consulting conducted the 2015 NFCS using an updated and modified survey instrument (a questionnaire) designed by Annamaria Lusardi (professor at Dartmouth College), Applied Research & Consulting LLC, the Office of Financial Education of the U.S. Department of the Treasury, and the FINRA Investor Education Foundation. Additionally, Craig Copeland, the Employee Benefit

Research Institute, the American Institute of Certified Public Accountants, and Professor Robert Willis (the University of Michigan, former principal investigator of the U.S. Health and Retirement Study), and other contributors to the survey design. For the ASE, the Census Bureau collaborated with survey sponsors; the Ewing Marion Kauffman Foundation and the Minority Business Development Agency.

Data Analysis Plan

I used the SPSS V27 software for Windows to analyze data collected in the study. Data cleaning, and additional proofreading for errors and inconsistent codes was performed by the source originators. The correlation between variables emerged using the Pearson correlation coefficient in determining the relationship (Puth et al., 2014). The goal of the data analysis was to answer the RQs and accept or reject the null hypotheses, which were as follows:

RQ1: What is the correlation between financial illiteracy and minority small business failure?

$H_0$1: There is no significant correlation between financial illiteracy and minority small business failure.

$H_1$1: There is a significant correlation between financial illiteracy and minority small business failure.

RQ2: What is the correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent?

$H_0$2: There is no significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

$H_1$2: There is a significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

I tested the null hypothesis by analyzing secondary data collected and reported via the FINRA by means of the NFCS and the U.S. Census Bureau via the ASE. The level of financial literacy and management capabilities skills were determined using scoring data from select questions on the 2015 FINRA NFCS survey instrument. The financial literacy element was determined using items M6 on interest rates, M7 on inflation, M8 on bonds, M31 on compound interest, M9 on a mortgage, and M10 on stock mutual fund risk. The management capabilities element was determined by scoring six additional questions: items A5 on training and education, J3 on cash handling, J30 on planning, B1 and B2 on social capital structure, and J32 on financial reporting and banking. I used data from the Consumer Finance Protection Bureau by means of the Financial Literacy Annual Report and SBA data as additional verification. The Pearson product-moment correlation coefficient (*r*) analysis was used to test for a relationship between independent and dependent variables. The bivariate linear regression random-effect model was performed. Additionally, univariate descriptive statistics were performed to depict data on the research variables. The one-way analysis of variance (ANOVA) and the bivariate linear regression random-effect model were performed to evaluate the null hypothesis to ensure that the means on the dependent variable were equal. To account for multiple statistical tests, the *p*-value corresponding to each test was adjusted using the Bonferroni correction. Covariate variables were used to compare and show variable-to-variable values.

I created a variable coding guide containing the names, labels, and value labels (see Appendix E). If a quantitative variable has many values, it would be impractical to present all values and frequencies (Green & Salkind, 2014). Therefore, adjustments were made to the data set values to ensure accurate data collection from the reports, and further analysis could be conducted upon variable formulation.

After adjustments were made and formulations completed, I cross-tabulated the results by pairing variables. The chi-square test was used to evaluate the relationships for significance found in the cross-tabulation analysis. The SPSS V27 was employed to perform statistical interpretation. Theoretical coding was used to identify relationships between variable concepts and to collate them into categories. The Pearson correlation coefficient r test was used to assess the degree of the relation of the quantitative variables. Bonferroni correction was used to support the revised significant level of $p<.001$. The significance test for r was used to examine if there was a linear relationship between variables in the population. Also, the bivariate linear regression analysis with ANOVA *t and F* test for evaluating the dependent variable population mean was deployed to evaluate how well the independent variable predict the dependent variable. The correlations between the variables were statistically significant indicating that an association is evident. The odds ratio was used to provide strength to the cross-tabulation and chi-square tests reported in Chapter 4.

Threats to Validity

Validity refers to whether a study is well designed and provides results that are generalizable to the population of interest (United For Sight, 2020). Research validity implies that instruments used, and data or findings collected are accurate, trustworthy, and obtained with reduced systemic error, therefore the validity of a study is essential for standardization or internal and external recognition for universal acceptance (Chander, 2018; Tunis et al., 2003). External validity is controlled by population representation, time, research environment and characteristics, data collection, and control of independent variables. External validity is the generalization followed for wider population acceptance (Chander, 2018). Internal validity is affected by the size and variability of subject attrition of the samples, history, and instrument sensitivity. Internal validity is the standard that the researcher followed to obtain the most truthful results (Chander, 2018).

External Validity

Because a researcher cannot work with the entire population of interest, a smaller sample of that population is used to draw conclusions about the larger group outside the research. External validity is related to how research results are accurately generalized to a broader population (United For Sight, 2020). A threat to external validity is an explanation of how the generalization might be wrong. There are three ways external validity could be wrong: people, places, or times (e.g., another place, with different people at a slightly later time) (Trochim, 2020). For this study, external validity represented the extent to which the findings were analytically generalizable across populations. According to Frankfort-Nachmias and Nachmias (2008), the two main issues of external validity are the representativeness of the sample and the reactive arrangements in the research procedure. To reduce the threat to external validity, random sample selection should be used (Trochim, 2020). The notable external threat to this nonexperimental study was the participant population, characteristics of the subjects, and the natural setting. To reduce participant threats, the administrators of the NFCS and the ASE ensured the heterogeneity of the sample population as much as feasibly possible (Ioannidis et al., 2014). The characteristics of the subjects, and the natural settings reflected the minority population being studied and the situation to be generalized. To maximize external validity, all participants for the study completed surveys and/or interviews in self-selected settings, and theoretical propositions and constant comparison analysis were performed (FINRA, 2016; U.S. Census Bureau, 2020).

Internal Validity

Internal validity helps to establish a causal relationship between two variables in a study (United For Sight, 2020). Internal validity is the approximate truth about assumptions in regard to causal relationships (Trochim, 2020). Internal validity is most often jeopardized because of extrinsic and intrinsic factors that occur before the research operation and impinges on the results of the study (Campbell & Stanley, 1963; Frankfort-Nachmias & Nachmias, 2008). Internal validity is achieved when a researcher can without doubt state that the results in the study were due to the changes imposed on the independent variable (United For Sight, 2020). The use of secondary data in a nonexperimental study such as this alleviated the possibility of researcher bias. Businesses were assigned to sampling frames using information retrieved from official administrative data to increase the level of agreement between sampling frame assignment and tabulation and to further strengthen internal validity and source reliability.

Construct Validity

Construct validity is the generalization from the research measures to the idea of the study measures, inferring that construct is the extent to which a researcher can allege that accurate presumptions can be made from the measures in the study to which the theoretical constructs were based (Trochim, 2020). To demonstrate the construct validity of a measuring instruments the examiner has to show that the relationships can be both identified and measured with the instrument (Frankfort-Nachmias & Nachmias, 2008). When a researcher claim that their study measures have construct, they are claiming to understand how the constructs or theories of the study and measures operate and that they can provide evidence of the variable behavior that is believed to be reality (Trochim, 2020). A study is considered to have construct validity if the researcher can demonstrate that the variables of interest were properly operationalized (United For Sight, 2020). To increase construct validity in this study, survey reports were selected randomly for coding verification and reliability. Extensive care was given to ensure the reported information contained no duplications, missing or inaccurate entries. All data were entered into the SPSS software to expose errors in coding and to analyze the data for predictive and probability values (Vogt, 2007). Additionally, the significance levels of rejection were set at .05 or .01, if the same test outcomes occurred .05% or 1 % of the time, the null hypothesis was to be rejected.

Ethical Procedures

Although the objective of the research is to contribute to the development of verifiable knowledge without intent to violate the rights and welfare of participants' ethical issues may arise at any point during a study. Therefore, each stage of the process may involve ethical considerations (Frankfort-Nachmias & Nachmias, 2008). To circumvent ethical violations, and to prevent repeat atrocities of the past, social and medical establishments created ethical standards for research (principles of ethical protections); The principle of voluntary participation prevents participants from being coerced into taking part in a study, The principle of informed consent assures that a participant is fully informed of procedures and risks before giving their signed consent (Office for Human Research Protections (OHRP), 1979). Ethical standards also prohibit risk of harm; physical or psychological, and additionally, the principles of confidentiality and anonymity assures participant identifying information will not be shared with persons not directly involved with the study and that the participant will remain anonymous throughout the study (OHRP, 1979; Trochim, 2020). For this research, all participant information was gathered from official records and reports. There was no hands-on participant contact, personal or organizational identifying information shared. There were no ethical concerns related to recruitment materials or data collection processes, and no informed consent agreements necessary. Throughout the study, precaution was taken to maintain the highest level of integrity and ethical standards.

The U.S. Census Bureau data confidentiality was directed by federal laws governing census reports Title 13 of the United States Code (U.S. Census Bureau, 2020). In this study, no published data disclosed the operations of individual establishments or businesses. The information and data obtained from the Internal Revenue Service, the Social Security Administration, and other sources via the Census Bureau were treated as confidential and could only be seen by employees sworn to protect the data from disclosure. For disclosure avoidance, the Census Bureau modified or removed the characteristics that put confidential information at risk of exposure. Additionally, the Census Bureau took steps to disguise or suppress the original data while making sure the results were still useful (U.S. Census Bureau, 2020). And even though this study had low to no risk and no direct population intervention or contact, a high level of care to data handling was mandatory. Thereby, ethical approval was required to perform the study and granted by the Walden University Institutional Review Board (IRB) under the following assigned IRB approval number: 11-11-20-0353223.

Summary

In summary and as a reminder, in this chapter, the FINRA NFCS, the U.S. Census Bureau’s ASE, and other data sources from 2009 until 2015 were identified as the specific sources of data collected, recorded, and analyzed. Chapter 3 also explained the materialization of the variable elements for analysis, provided an overview of the study methodology, and introduced the research designs, correlational and cross-sectional designs. The details of the data analysis plan and processes; the Pearson product-moment correlation coefficient, the cross-tabulation, chi-square, and odds ratios utilization were explained. Furthermore, an explanation for the need to deploy the Bonferroni correction, significance test for *r,* and bivariate linear regression analysis with ANOVA *t* and *F* test was annotated. And last, the threats to external, internal, construct validity, and ethical concerns were dispelled.

Chapter 4 of the study includes a presentation of the analyzed results and the connection to current literature concerning financial illiteracy and minority small business failure. The chapter also provided a detailed view of the timeframe for data collection, reported statistical analysis findings, and answers the RQs and hypotheses.

Chapter 4: Results

The purpose of this study was to determine whether a quantitative correlation exists between financial illiteracy and minority small business failure in the United States. I performed an exhaustive review of secondary financial literacy and various business management research data that relate to the ability of the U.S. minority population to create wealth through sustained entrepreneurial success. The RQs and the hypotheses for the study were as follows:

RQ1: What is the correlation between financial illiteracy and minority small business failure?

> $H_0$1: There is no significant correlation between financial illiteracy and minority small business failure.
>
> $H_1$1: There is a significant correlation between financial illiteracy and minority small business failure.

RQ2: What is the correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent?

> $H_0$2: There is no significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.
>
> $H_1$2: There is a significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy managerial skills and concepts are minimal or nonexistent.

This chapter includes participant demographics and a brief explanation of data collection actions. Additionally, I provide a detailed statistical evaluation of assumptions and an analysis of findings for hypothesis testing using SPSS V27. The chapter concludes with a summary of the results.

Data Collection

Existing data and records collected and maintained by the FINRA Investor Education Foundation, the U.S. Census Bureau, and the SBA supplied the information for the study analysis. The data for this research consisted primarily of routine survey research collected in short-term periods of 6 months or less for the FINRA and U.S. Census Bureau by outside agencies. The survey research consisted of telephone interviews, computerized, and mail in questionnaires.

For this study of secondary resource data, there was no recruitment of participants. All participant data represented adults residing in the United States having recorded information in the U.S. Census Bureau files. All sources of data were nationwide studies of the U.S. population. The study analysis was designed to represent a generalization of the U.S. minority business owner populace of approximately 443,322 using data from the NFCS and ASE survey years 2015.

Descriptive Statistics

The sampling frames and standard demographics for the NFCS included: age (18+), gender, race and ethnicity (African American, Hispanic, and other races), education (non-high school graduate, high school graduate/no college, some college, college graduate/postgraduate), household income (less than $25,000, $25,000 to

$75,000, more than $75,000), geography, marital status and employment status. The 2015 NFCS primary sample included 500 residents per state. The sample was constructed to represent the general U.S. adult population via quotas set to approximate census distributions (FINRA Investor Education Foundation, 2016). To ensure adequate sampling for a more accurate analysis a minimum (N = 150) per group were selected for African Americans, Hispanics, Asians, and adults with less than high school education. Loose quotas were set to prevent overconcentration of a given gender or age group, income, ethnicity, and education. The 2015 year sample respondents totaled 27,564 adults. The sampling frames and standard demographics for the ASE included: business acquired, owner functions, hours worked, primary source of income, prior business involvement, education level, age, birthplace (U.S. citizen), veteran characteristic, ownership reasons.

The U.S. Census Bureau collects data on business characteristics and the demographics of business owners every 5 years via ASE (Office of Advocacy, 2016). The ASE universe was framed using stratification of the 50 most populated metropolitan statistical areas and the length of time in years that the firm was in business (see Appendix F). The confidence cutoffs varied by sampling stratum and were tested at a different rate depending on the number of companies in a particular industry and/or state. For convenience, insurance of adequate representation of the various groups in the population, and increased parameters accuracy, the remaining population was selected using stratified systematic random sampling. In the 2015 ASE, the 1-year sample respondent total equaled approximately 3,560,119 business owners, of which 1,072,394 were minorities.

The sampling frames and standard demographics for this study included: business owner (financial literacy & management capabilities), Race and ethnicity (minority, African American, Hispanic, other races), education (non-high school graduate, high school graduate/no college, some college, college graduate/postgraduate)

Study Results

I conducted univariate linear model correlational analyses to examine the relationship between variables, means, and standard deviations between financial literacy and business management variables. Data normality was visually reviewed using Q-Q plots.

Descriptive Statistics

It was essential to survey an adequate number of samples to ensure the appropriateness of applying findings to the broader minority population (see Train, 2002). I retrieved participant survey data from the Census Bureau and FINRA internet data banks. Tabulated and calculated information formed the basis for the exploration. No individual or personal records required examination. The population sample of (N = 111) as suggested by the G*Power analysis was examined (see Table 3). Because the NFCS participants were a part of the Census Bureau files 2015 survey information, the 111 samples used were taken from the 27,564 financial literacy study respondents. The participants were 100% minorities whose business had ceased operations. The average education levels of the participants varied with .02% having less than high school, .15%

having completed high school, and 30% having completed some college. Table 4 illustrates participant descriptive statistics.

The average mean for the financial literacy construct was 185.5%, and standard deviations were 176.23%, the business failure management construct mean was 45.13% with standard deviations of 51.51% as seen in Table 5. Descriptive statistics for frequency count and percentages for selected variables are presented in Appendix G. To ensure accurate data calculations from source reports, adjustments were made to data set values. Financial literacy levels are represented using questions M6 through M10 and M31, and business management failure using A5, B1, B2, J3, J30, J32 on the FINRA financial capability survey.

Table 4

Participant Descriptive Statistics

Description	M
Age 18+	100.0
Ethnicity (minority)	100.0
Business owner (ceased operations)	100.0
Minority owners' education levels	
< High school	.02
High school	.02
Some college	.15
College graduate	.30

Note. N = 111.

Table 5

Variable Descriptive Statistics

Variable	M	SD
Financial Literacy Scores	185.50	176.23
(M6) Interest	46.83	48.31
(M7)Inflation	20.56	38.73
(M8)Bond Pricing	23.96	40.15
(M9)Mortgage	32.41	44.74
(M10) Risk	30.01	44.47
Business Failure /Mgmt Scores	45.13	51.51
(J3) Cash	16.52	31.95
(J30) Planning	3.74	15.28
(J32) Financial Reporting	2.14	9.29
(B1/B2) Capital Structure	12.21	27.17
(A5)Training/Education	4.44	1.85

Note: N = 111.

Evaluation of Assumptions

There are statistical techniques that the researcher can use to assess the extent of association of two variables by a single summarizing measure (Frankfort-Nachmias & Nachmias, 2008). Several assumptions required evaluations to know which effect model was appropriate for correlational analysis. If the assumptions about those variables are bivariate normally distributed, samples randomly selected from the population, and the scores on each variable are independent of each other, correlation coefficients (*r*) can assess the direction of association, degree, and strength that quantitative variables are linearly related (Green & Salkind, 2014). The random-effect bivariate linear regression test Y = βslopeX + βconstant can be accomplished to assist in evaluating whether the independent variable predicts the independent variable (Green & Salkind, 2014).

According to Green and Salkind (2014), plots can show if unrealistic scores (outliers) excessively influence the value of the correlation coefficient of whether there is a nonlinear relationship between the variables. To examine data visually, researchers often use the descriptive statistics Q-Q plot (Korkmaz et al., 2014). SPSS was used to generate Q-Q plots for the study variables; financial literacy and business management capabilities (see Figures 3 and 4) were generated using SPSS. The normal distribution of variables and scenarios for this study was constructed based on calculated mean data from secondary survey data. The independence scores support the assumption that variables are random samples from the represented population. The variables financial literacy and business management created the trend-line. In examining the Q-Q plots, I found no visible outliers or irregularity in scoring, therefore showing normal distribution and independence.

Figure 3

Q-Q Plot for Financial Literacy Variables

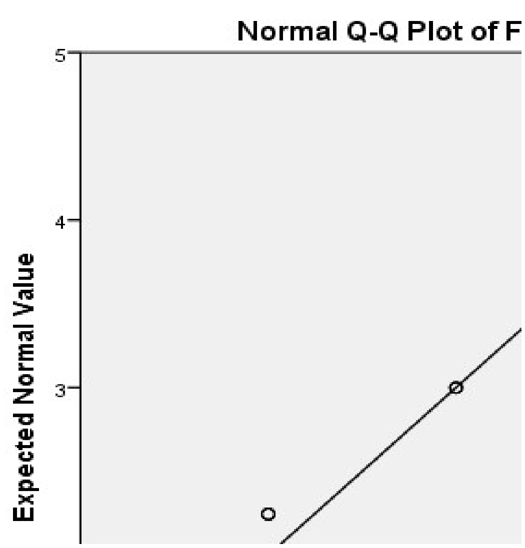
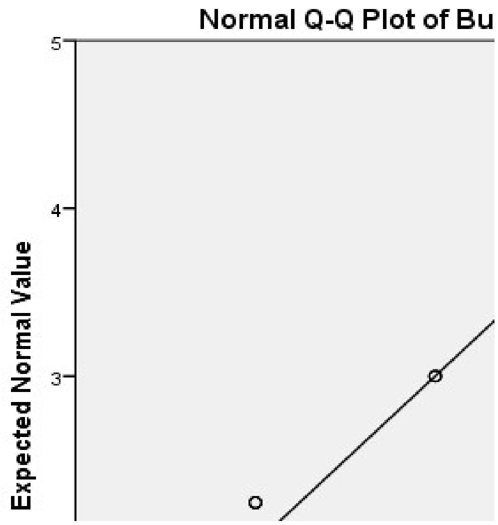


Figure 4

Q-Q Plot for Business Management Variables



Analysis Summary

The purpose of the study was to determine whether a quantitative correlation exists between financial illiteracy and minority small business failure in the United States. I performed an exhaustive review of secondary financial literacy and various business management research data that relate to the ability of the U.S. minority population to create wealth through sustained entrepreneurial success. To determine the relationship between the variables, I examined secondary data from the FINRA and the U.S. Census Bureau using Pearson correlation and linear regression analysis in SPSS V27.

According to Green and Salkind (2014), it is essential to perform a scatterplot examination of the predictor and the criterion variable before conducting a regression analysis to ensure that nonlinear relationships do not exist. Therefore, Q-Q plots were used appropriately for the variables. I used the analysis software SPSS V27 for Windows to complete the study hypothesis testing. Theoretical coding was used to identify relationships between variable concepts and to collate them into categories. Pearson correlation coefficient *r* test was used to assess the degree of the relation of the quantitative variables. Bonferroni correction was applied to support revised significance level of $p < .001$. The significance test for *r* was used to examine for linear relationships between variables in the population. The bivariate linear regression analysis with ANOVA *t* and *F* test to evaluate the dependent variable population means was used to determine how well the independent variable predicts the dependent variable. Lastly, the cross-tabulation analysis chi-square test was used to tabulate an overall result of one variable against another to evaluate relationship significance.

SPSS uses an effect size index ranging from -1 to + 1 that indicates that scores flux (high or low) on one variable tend to mirror that of the other. Scores on the variable are deemed low or high in comparison to the mean score. In interpreting the correlation, if the correlation (*r*) is positive, it suggests that as the independent variable X increase, the dependent variable Y will also increase (i.e., low scores on one variable tend to associate with low scores on the other) (Green, & Salkind, 2014). If *r* is zero, it suggests that as X increases, Y does not increase or decrease (i.e., low scores on one variable will tend to be equal to the other). A negative *r* suggests that if X increases, Y will decrease, (i.e., low scores on one variable tend to associate high scores on the other). Moreover, as in this study, when one variable is believed to be a predictor of the other, the strength of the relationship can be interpreted by squaring the correlation coefficient (Green, & Salkind, 2014).

Regression analysis is a method of identifying the nature of a relationship between two variables using the linear straight-line function $Y = \alpha + bX$ (Frankfort-Nachmias & Nachmias, 2008). The bivariate linear regression significance test helped to determine if X (financial literacy capabilities) is a predictor to Y (minority business failures) by assessing whether the correlation coefficient/slope is equal to zero. By squaring (r^2), I obtained the index required to show how well X can predict Y. If linear regression r^2 is representative of the proportion of Y accounted for by direct association with X, the standard error of estimates indicates how significant the typical error is in predicting the Y from the X variable. Therefore, if the slop does not contain the value zero with a 95% confidence interval, the hypothesis should be rejected at the .05 level.

Table 6

Measure of Variable Association

If the absolute value of a measure of association is:	The association will be described as:
.000	No relationship
.001 to .199	Weak
.200 to .399	Moderate
.400 to .599	Strong
.600 to .999	Very Strong
1.000	Perfect relationship

Research Question 1

What is the correlation between financial illiteracy and minority small business failure?

Findings for Hypothesis 1

$H_0$1: There is no significant correlation between financial illiteracy and minority small business failure.

$H_1$1: There is a significant correlation between financial illiteracy and minority small business failure.

This hypothesis testing concerns the relationship between the two primary study variables: financial illiteracy (Literacy) and minority small business failure (Business Management).

Table 7

Correlation Matrix: Financial Literacy and Minority Small Business Management

		Inflation	Bond Pricing	Mortgage	Risk	Interest
Cash	(*r*)	.014	-.012	-.026	-.014	-.196*
	(*p*)	.884	.903	.790	.887	.039
Planning	(*r*)	.200*	.043	-.108	.140	.065
	(*p*)	.035	.654	.258	.143	.499
Fin Rep	(*r*)	.196*	.181	-.063	.163	.109
	(*p*)	.040	.058	.514	.087	.254
Cap Struct	(*r*)	-.074	-.021	-.075	.138	-.109

(p)	.442	.824	.432	.148	.257
Trn & Edu (r)	-.170	-.187	-.369**	-.208*	-.340**
(p)	.077	.052	.000	.030	.000

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Regression Analysis. The random-effects bivariate linear regression analysis was performed to assess how well the independent variable financial illiteracy (Literacy) predicts the dependent variable minority small business failure (Business Management). The regression analysis model summary Table 8 display the prediction equation R = .161 and R^2 = .026 coefficient. Table 9 show the regression ANOVA that provide *F* and *t*-test data, *F* (1,109) = 2.896, p >.01(.09) and *t* (109) = 1.70, p >.01(.09) directional *b* = .092. And the regression prediction equation unstandardized coefficients additive constant (36.411), slope weight (.047), and the standardized additive constant (.161) with slope weight of zero are shown in Table 10.

Table 8

Correlation Coefficient Model Summary H_o1

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	*F* Change	df1	df2	Sig. *F* Change
1	.161[a]	.026	.017	51.08063	.026	2.896	1	109	.092

a. Predictors: (Constant), Minority Fin Literacy

Table 9

Analysis of Variance (ANOVA) H_o1

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	7556.807	1	7556.807	2.896	.092[b]
1	Residual	284406.166	109	2609.231		
	Total	291962.973	110			

a. Dependent Variable: Minority Business Mgmt Scores
b. Predictors: (Constant), Minority Fin Literacy Scores

Table 10

Pearson Correlation Coefficients H_o1

Coefficients[a]							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	36.411	7.056		5.160	.000	22.426	50.396
Minority Fin Lit Scores	.047	.028	.161	1.702	.092	-.008	.102

a. Dependent Variable: Minority Business Failure Scores

The Correlation Matrix, Table 7 contains Pearson correlation between financial literacy and management capabilities. There were two items; training-education and mortgage handling (r = -.369), and training-education and interest handling (r = -.340) that were significant correlations at the Bonferroni corrected level (p < .001) and (p < .01). And four items; cash and interest handling (r = -.196), planning and inflation (r = .200), financial reporting and inflation (r = .196), training-education and risk (r = -.208) that significantly correlated at (p < .05). These correlations imply a positive correlation between financial literacy and business management. The positive correlation of +1 indicates that as financial literacy scores increase the scores in business management capability also increase at a constant rate.

For stronger validity, bivariate linear regression analysis for correlation was performed. Tables 15 and 17 show additional relationship via ANOVA analysis data, where R = .189, and R^2 = .036 indicates that X (financial literacy) has a 4% (r^2 = .036 or F = 4.059) variance effect on Y (minority small business failure). Based on the correlation coefficient (r) we can conclude that overall financial literacy does predict business management capability.

Lastly, Table 10 provide data for the regression/prediction equation Y = βslopeX X + βconstant; Y = .047 (financial literacy) + 36.411 (business failure). The positive coefficient slope weight of .047 along with the scatterplot review (y = 8.5.4) + 0.08X for the two variables show linear relations that indicate increased overall financial literacy will predict decreased or lower business failures. The correlation between the variables was .16% (r) indicating that approximately .03 % (r^2) of the business failure variance is accounted for by the linear relationship. Thereby, the equation slop does not contain zero value at 95% confidence interval the hypothesis should be rejected at .05. The significant level .16 for the correlation of the variables has led to the rejection of the null hypothesis in favor of the alternative.

Themes from the literature support the test results, and the theoretical framework of system thinking emerges. The significant correlations reiterate Kim (1999) thoughts that system thinking focused on wholeness that identifies interconnections between parts. Also, Tate's (2009) indications that management discipline concerns understanding the whole system and in the absence of competencies, an organization can systematically fail emerges as system thinking.

Research Question 2

What is the correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent?

Findings for Hypothesis 2 Related to Financial Literacy

$H_0 2$: There is no significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

$H_1 2$: There is a significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

This second and third theory testing concerns the relationship of the same two concept variables as in hypothesis one but with changes in financial literacy and managerial skills and concepts scores.

Correlation Analysis. For this correlation analysis, the financial literacy scores were lowered on average 100 and 200 points for each sample with previous scores equaling 200 or more. The bivariate correlation was performed to assess the relation of the variables. At N=111, Tables 11 and 12 show the financial literacy variable mean scores at 117.9369 and 93.6126 with standard deviations of 148.43047 and 113.36427. The business management-failure variable mean scores were 45.1351 with a standard deviation of 51.51901. Tables 13 and 14 below show Pearson correlation coefficient index effect sizes as +1 at a 95% confidence interval, *r* =189* having a significant correlation at the 0.05 level, and *r* = .125 with no indication of association.

Table 11

Correlation Descriptive Statistics Scores -100 Points (*H*o2) (Part 1)

Descriptive Statistics			
	Mean	Std. Deviation	N
Minority Fin Lit Scores	117.9369	148.43047	111
Minority Busi Failure Scores	45.1351	51.51901	111

Table 12

Correlation Descriptive Statistics Scores -200 Points (*H*02) (Part 1)

Descriptive Statistics			
	Mean	Std. Deviation	N
Minority Fin Lit Scores	93.6126	113.36427	111
Minority Busi Failure Scores	45.1351	51.51901	111

Table 13

Bivariate Correlation Among Variables (2-tailed) -100 Points ($H_0$2) (Part 1)

Correlations			
		Minority Fin Lit Scores	Minority Busi Failure Scores
Minority Fin Lit Scores	Pearson Correlation	1	.189*
	Sig. (2-tailed)		.046
	N	111	111
Minority Busi Failure Scores	Pearson Correlation	.189*	1
	Sig. (2-tailed)	.046	
	N	111	111

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

Table 14

Bivariate Correlation Among Variables (2-tailed) -200 Points ($H_0$2) (Part 1)

Correlations			
		Minority Fin Lit Scores	Minority Busi Failure Scores
Minority Fin Lit Scores	Pearson Correlation	1	.125
	Sig. (2-tailed)		.193
	N	111	111
Minority Busi Failure Scores	Pearson Correlation	.125	1
	Sig. (2-tailed)	.193	
	N	111	111

Regression Analysis. The random-effects bivariate linear regression analysis was performed to assess how well the independent variable (financial illiteracy) predicts the dependent variable (minority small business failure). The regression analysis model summaries Tables 15 and 16, display the prediction equation R = .189 and coefficient R^2 =.036. Table 17 and 18 show the regression with analysis of variance (ANOVA) that provide *F* and *t*-test data, F (1, 109) = 4.059, p >.01(.046) if rounded up p =.05) and t (109) = 2.015, p >.01(.046) directional b =.046. And the regression prediction equation unstandardized coefficients additive constant (37.379), slope weight (.066), and the standardized additive constant (.189) at 100 points less and 6.057 and .125 at 200 points less with slope weights of zero as shown in Tables 19 and 20.

Table 15

Correlation Coefficient Model Summary -100 Points ($H_0$2) (Part 1)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.189[a]	.036	.027	50.81718

a. Predictors: (Constant), Minority Fin Lit Scores

Table 16

Correlation Coefficient Model Summary -200 Points ($H_0$2) (Part 1)

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. *F* Change
1	.125[a]	.016	.006	51.35142	.016	1.719	1	109	.193

a. Predictors: (Constant), Minority Fin Lit Scores

Table 17

Analysis of Variance (ANOVA) -100 Points ($H_0$2) (Part 1)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10482.938	1	10482.938	4.059	.046[b]
	Residual	281480.035	109	2582.386		
	Total	291962.973	110			

a. Dependent Variable: Minority Busi Failure Scores
b. Predictors: (Constant), Minority Fin Lit Scores

Table 18

Analysis of Variance (ANOVA) -200 Points ($H_0$2) (Part 1)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4533.460	1	4533.460	1.719	.193[b]
	Residual	287429.513	109	2636.968		
	Total	291962.973	110			

a. Dependent Variable: Minority Busi Failure Scores

b. Predictors: (Constant), Minority Fin Lit Scores

Table 19

Pearson Correlation Coefficients -100 Points (*H_0*2) (Part 1)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	37.379	6.171		6.057	.000	25.147	49.610
	Min Fin Lit Sc.	.066	.033	.189	2.015	.046	.001	.130

a. Dependent Variable: Minority Busi Failure Scores

Table 20

Pearson Correlation Coefficients -200 Points (*H_0*2) (Part 1)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	39.834	6.333		6.290	.000	27.283	52.385
	Minority Fin Lit Scores	57	.043	.125	1.311	.193	-.029	.142

a. Dependent Variable: Minority Busi Failure Scores

Hypothesis testing for $H_0$2 was initiated with the performance of Pearson correlation analysis between financial literacy and management capabilities with altered financial literacy scoring. The financial literacy scores were lowered on average 100 and 200 points respectively for each sample with previous scores of 200 or more while the business management items scores were unchanged. Tables 11 and 12 provide mean and standard deviation data to show the differences between the – 100 and -200 data changes. Tables 13 and 14 show simple correlation values; (*r* = .189*) at -100 and (*r*

=.125) at -200. In both instances, the correlation analysis shows a +1 correlation indicator which implies a relationship between financial literacy and business management. And the positive correlation indicator implies that as financial literacy scores increase, the scores in business management capability will also increase, at a constant rate.

For more clarity, bivariate linear regression analyses are shown in Tables 15 thru 20. Predictor data R = .189, R^2 = .036 at -100 and R=.125, R^2 = .016 at -200 score change data for the regression coefficient (*r*) test equation is displayed in Table 15. Also, the analysis test of variable show significance in two additional ways; using the *F* test shown in the ANOVA Tables 17 and 18 and the *t* test in coefficients Tables 19 and 20.

Lastly, the regression/prediction equation $Y = \beta_{slopeX} X + \beta_{constant}$ solved; Y = .07 (financial literacy) + 37.379 (constant) at -100 and Y = .06 (financial literacy) + 39.834 (constant) at -200 show positive slope weights. Also, the slop intervals .001 to .130 and -.029 to .142 do not contain zero value at 95% confidence indicate that financial literacy is significantly related to business management capabilities which further indicates increased financial literacy scores will predict a decrease or lower business failures. The correlations between the financial literacy index and the business management capabilities index were.189 and .125. Predictor data in the regression analysis show that approximately 4% (r^2 =.036 or F =4.059) at -100 and 2% (r^2 =.016 or F = 1.719) at -200 of the variance of minority business failure index was accounted for by the linear relationship.

This hypothesis testing concluded that financial literacy is correlated to and does predict change in business management capability, therefore the null hypothesis; $H_0 2$ (Part 1): There is no significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy is minimal or nonexistent was rejected.

As the scores being a representation of education and/or financial literacy decrease the theme and philosophical thought of human capital emerges. Mention and Bontis (2013) on human capital insisted that the core of intellectual wealth, business ownership in this case; is the combination of business competencies of knowledge, skills, experience, and capabilities. As seen in the correlation matrix shown in Table 10 there are significant connections between the financial literacy and business management training and education concept characteristics.

The formal education levels in the study were: .06% had less than high school, .11% had high school degree, .30% had some college, and .31% had college degrees, and the overall literacy scores were 881 out of a possible 1,887. Management scores were 1,811 out of a possible 2,442. Therefore, it is in keeping with the thought that human capital is vital to business management because a person cannot be separated from their knowledge, and skills (Becker, 2008). Additionally, as stated by Nasser and Nuseibeh (2003), because most people make decisions using first-hand information, financial education is pertinent when managing money.

Findings for Hypothesis 2 Related to Managerial Skills and Concepts

$H_0 2$: There is no significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

$H_1 2$: There is a significant correlation between financial illiteracy and minority small business failure when minority owner financial literacy and managerial skills and concepts are minimal or nonexistent.

The hypothesis testing for this question involves the examination of a relationship between the primary study variables with changes to the management capabilities scores.

Correlation Analysis. This hypothesis testing also included the same variables as in hypotheses is one and two. But for this correlation test for r, the management scores were lowered on average a 100 points for those that were previously 100 or above. The bivariate correlation for $N = 111$ was performed to assess the variable correlational relation. The correlation coefficient descriptive mean was 185.5045 and 14.5135 with standard deviations of 176.23496 and 9.49915 respectively (see Table 21). Pearson correlation coefficient index effect sizes were +1 at a 95% confidence interval, r =.008, and other statistics are shown in Table 22.

Table 21

Correlation Descriptive Statistics Scores ($H_0 2$) (Part 2)

Descriptive Statistics			
	Mean	Std. Deviation	N
Minority Fin Lit Scores	185.5045	176.23496	111

Minority Busi Failure Scores	14.5135	9.49915	111

Table 22

Bivariate Correlation Among Variables (2-tailed) ($H_0$2) (Part 2)

Correlations			
		Minority Fin Lit Scores	Minority Busi Failure Scores
Minority Fin Lit Scores	Pearson Correlation	1	.008
	Sig. (2-tailed)		.937
	N	111	111
Minority Busi Failure Scores	Pearson Correlation	.008	1
	Sig. (2-tailed)	.937	
	N	111	111

Regression Analysis. Again, the random-effects bivariate linear regression analysis was performed to assess the independent variable (financial illiteracy) to dependent variable (minority small business failure) predictability. The regression analysis model summary (Tables 23) display the prediction equation R = .008 and coefficient R^2 = .000. The regression ANOVA (Table 24) provide *F* and *t*-test data, F (1, 109) =.006, $p > 0.1$ (.937) and t (109) =.080, $p < .01$ (.937) directional b =.937. And the regression prediction equation unstandardized coefficients additive constant (14.437), slope weight (.000) and the standardized additive constant (.008) with slope weight of zero is shown in (Table 25).

Table 23

Correlation Coefficient Model Summary ($H_0$2) (Part 2)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.008[a]	.000	-.009	9.54235

a. Predictors: (Constant), Minority Fin Lit Scores

Table 24

Analysis of Variance (ANOVA) ($H_0$2) (Part 2)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.577	1	.577	.006	.937[b]
	Residual	9925.153	109	91.056		
	Total	9925.730	110			

a. Dependent Variable: Minority Busi Failure Scores
b. Predictors: (Constant), Minority Fin Lit Scores

Table 25

Pearson Correlation Coefficients ($H_0$2) (Part 2)

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	14.437	1.318		10.953	.000	11.825	17.050
	Minority Fin Lit	.000	.005	.008	.080	.937	-.010	.011

a. Dependent Variable: Minority Busi Failure Scores

For the final hypothesis testing, H$_0$2 (Part 2), Pearson correlation between variables was examined using an altered business management data set. The Business management scores were lowered on average 100 points for each sample with previous scores of 100 or above while the financial literacy items were unchanged. Table 21 provides mean and standard deviation data to show the score change effects. Table 22 shows simple correlation values (r = +1, .008) at -100. The correlation analysis +1 correlation indicator implies two things; 1) that there is a relationship between financial literacy and business management and 2) as managerial capabilities scores decrease the scores in financial literacy capability will decrease at a constant rate.

For more validity, as shown in Tables 23-25 bivariate linear regression analysis was accomplished. Predictor R = .008, and R^2 = .000 at -100 score change for the regression coefficient (r) test equation is displayed in Table 23. Again, as in earlier testing, the regression analysis test for variable significance was completed using the F test as shown in the ANOVA (see Table 24) and the t-test in coefficients (see Table 25).

Additionally, the regression/prediction equation Y = βslopeX X + βconstant solved Y = .000 (financial literacy) + 14.437 (constant) at -100 shows zero slope weights and the slop intervals -.010 to .011 value at 95% confidence indicate that financial literacy is significantly related to business management capabilities, and decreased managerial capabilities are related to decreased or lower financial literacy capability. The correlation between the financial literacy index and the business management capabilities index was .008. Predictor data in the regression analysis show that a low level of approximately .000 to .006 (r^2 =.000 or F =.006) at -100, indicated that 0% of the variance of financial literacy index was accounted for in the linear relationship with business management.

This hypothesis testing concluded that the variables are correlated, and when management capabilities are minimal or nonexistent, financial literacy is also. Therefore, the null hypothesis; $H_0 2$ (Part 2): There is no significant correlation between financial illiteracy and minority small business failure when minority owner managerial skills and concepts are minimal or nonexistent was rejected.

In the testing of hypothesis two (Part 2), the theme of inexperience and the theory of signaling and positioning emerged. When owner-managers do not have the opportunities to lead an organization before becoming a business owner they often imitate behaviors of others in the attempt to gain inclusion (Downing, 2005).

Table 26

Chi-Square Test for Correlation

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56574.687[a]	850	.000
Likelihood Ratio	20339.885	850	.000
Linear-by-Linear Association	375.802	1	.000
N of Valid Cases	5010		

a. 611 cells (67.1%) have expected count less than 5. The minimum expected count is .01.

Table 27

Phi Nominal Symmetric Measures

Symmetric Measures			
		Value	Approx. Sig.
Nominal by	Phi	3.360	.000
Nominal	Cramer's V	.672	.000
N of Valid Cases		5010	

Summary

Lastly, for added validity, the two-way contingency table cross-tabulation analysis chi-square test was executed to further solidify the statistical relationship existing between the study variables (see Tables 26 and 27). The chi-square test, Pearson X^2 is 56574.687, p = .000, and the chi-square likelihood ratio test X^2 (850, N = 5010) =

.000 indicated an exceedingly high likelihood of a significant relationship between financial literacy and minority business failures. As in Pearson correlation, the Phi coefficient value range -1 to +1. Values close to zero are thought to have a weak relationship, and those close to 1 indicate a strong relationship. As seen in Table 27, the Phi correlation value = 3.360 where p = <.001 show indications of a strong relationship between the study variables. Therefore, with the additional assurance, all null hypotheses were rejected in this study.

Chapter 5 of this study concludes the research by providing a guided interpretation of the research findings and study limitations. The section also gives an in-depth discussion, recommendations for future research, and implications for potential positive social change, and finally, an overview conclusion of the key essence of the study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of the study was to determine whether a quantitative correlation exists between financial illiteracy and minority small business failure in the United States. I performed an exhaustive review of secondary financial literacy and various business and management research data that relate to the ability of the U.S. minority population to create wealth through sustained entrepreneurial success. The specific management problem of focus was the potential correlation between financial illiteracy and minority small business failure. The research was conducted to provide information and resources for economic decision-making to address the specific management problem. The general findings of the research indicate that there is a correlation between the characteristics of financial literacy (illiteracy) and management capabilities (minority small business failure). The study also confirmed that there are relations between the fundamental concepts of finance and business management that, if low or absent, can contribute to minority business failure. Chapter 5 includes a summary of the study findings in the context of theory and concepts and discussion of the limitations to generalization and validity and reliability. The chapter also includes recommendations for further research, implications for positive social change, and a conclusion that encapsulates the main essence of the study.

Interpretation of the Findings

I conducted the study using samples retrieved from previous studies conducted by the FINRA and the U.S. Census Bureau. The specific management problem of focus was the potential correlation between financial illiteracy and minority small business failure. The research was conducted to add to the knowledge bank resources that bring attention to the problem that motivated this study and to provide information to which important economic decisions can be made. The general findings of the research indicated that there is a correlation between the characteristics of financial illiteracy and minority small business failure. It also confirms that there are relations between the fundamental concepts of finance and business management skills that if minimal or nonexistent will contribute profoundly to minority small business failure.

I examined the relationship between financial illiteracy and minority small business failure to further extend knowledge in the field of management. The study included three statistical approaches. These were Pearson product-moment correlation coefficient, the bivariate linear regression analysis that included a correlation and ANOVA, and the chi-square test with Phi nominal measures. I used these approaches to examine secondary data for 111 U.S. minority small business owners.

The mere collection of data for the research confirms McManus's (2016) and Sullivan's (2007) observed that minority business ownership and success rates are low in the United States. Just as the financial literacy scores used in this examination, obtained from the NFCS on which this research was an extension of, there are other studies such as Fairlie and Robb (2008) that also revealed low minority small business success in the U.S. Additionally, the works initiated by the FINRA confirmed the high rate of financial illiteracy among the minority population (Cerarini et al., 2010; Elan & Goodrich, 2011; Lusardi, 2005; Lusardi, 2011; Mandell, 2004).

I thoroughly examined NFCS scores in conjunction with select U.S. Census Bureau and the SBA data to determine the study variables' correlation. Table 5 is a presentation of the selected variable scoring means (*M*) scores and standard deviations (*SD*). The overall variable mean differences, 185.50 for literacy and 45.13 for business management scores, shows how principles in management are either detailed or prognostic fundamentals that explain the relationships between two or more variables and describe how one variable relates to another upon interaction (Jindrichovska, 2013).

Correlation and regression analysis showed a significant association between financial illiteracy and minority small business failure at $r = +1$ and $R^2 = .026$. To test the hypothesis for the supporting study question RQ2, the Pearson correlation analysis used to examine RQ1 was replicated. Again, a positive outcome of $r = +1$ with correlation significances at R=.189 / 125 with R^2 .036/.006 adjusted as shown in Tables 15 and 16 emerged. The correlation between variables appeared in each analysis performed, resulting in the rejection of all null hypotheses. The predicted alternative hypotheses were determined to be true and were therefore accepted.

I examined the calculated financial literacy scores along with the correlation and regression analysis. Upon making comparisons, the OIEA research finding confirmed that minority groups who are most often the less educated have a higher lack of financial knowledge than the mainstream population. Additionally, as I examined the components of financial literacy the theme of social capital premise emerged. The theme emergence confirmed Bewaji et al.'s (2015) findings that ethnic minority business owner lower education levels were one but a significant reason for their financial exclusion.

The calculated management capability scores in the study confirm Bates's (2011) view that minority business progress is rooted in the human capital gains of the owners. Brimmer (1966, as cited in Bates, 2011) concluded that minority business owners lack the managerial competence necessary to compete successfully in business. The findings of the study further confirm the thoughts on the interconnectivity of parts by Kim (1999) and the evidence of Ployhart et al. (2014, as cited in Koyagialo, 2016) that human capital with required skills to be productive is necessary for business success.

Limitations of the Study

The study was limited in differing ways. The research was designed to explore whether a relationship exists between the independent and dependent variables. One critical constraint was the use of secondary data as the primary source of hypotheses testing. The NFCS data were prone to coverage error, due to the study samples selection methods and information origination in the U.S. Census Bureau archives, which has inherent limitations such as preciseness, content, calculation and reporting errors as stated in Chapter 1.

Although the study met the intended objective of generalizability, there were other essential limitations such as sample diversity, unfamiliar instruments effects, and time-cost concerns. The study target population was 100% minority, as representation of all U.S. minority business owners using a relatively limited 111 samples. For this study, all scoring was completed using information obtained from specific survey instruments developed by makers of the secondary data sources. The limited information collected from the sources required modifications and adjustments to be testable in this study.

The cost and time needed to execute a more in-depth study of this subject would undoubtedly be rather expensive and time-consuming. Therefore, sponsorship should be considered. Nevertheless, on a more positive side, as stated in Chapter 1, the inability to manipulate data may have reduced bias and increased the research validity and reliability.

Recommendations

Previous researchers (e.g., Britt & Sussan, 2015; Lusardi & Mitchell, 2013) have examined financial literacy and small business failure extensively. As shown in the literature review in Chapter 2, financial illiteracy and minority small business survivability are major societal problems. Ropega's (2011) study on small business failure in the United States offered evidence that most small businesses fail due to poor financial and business management skills.

A big picture focus on the issue of how financial illiteracy correlates to minority small business failure is recommended. The Jump$tart Coalition's survey of American youths' consumer knowledge in financial literacy applications revealed a considerable lack of understanding of necessary funds concepts, principles, and management (Harnisch, 2010). Becker (2008) communicated that families and parents have an enormous influence on the human capital attainment of their children. Nevertheless, in addition to home, there are others places outside the family such as schools and community centers where children can learn financial literacy, as well. Conversely, in the U.S. despite evidence that implemented high school personal finance mandates help prepare students to successfully navigate their financial lives (Brown et al., 2014); only

17 U.S. states require high school students to take a course in personal finance (Council for Economic Education, 2016). Until the U.S. politicians, educators, and policymakers are provided strong evidence to support the ideology that not only is the achievement of financial knowledge important for individuals' economic vitality, necessary and good for the financial strength of the nation (Zanakis et al., 2012), the financial education gaps and restricted accessibility will continue.

This study was intended to determine whether a correlation exists between the two variables, not causation. The work was a modified replication, combination, and extension of previous studies designed to bridge the gap in the literature in the field of management. Even though this study has successfully revealed a significant correlation between financial illiteracy and minority small business failures, differences in strengths and weaknesses between variable characteristics did emerge. To make variable comparisons in this study would have been out of the alignment of the research objective. Therefore, future examinations by contrast, are suggested.

I further recommend similar research on whether a cause-and-effect relationship between the variables exists. To avoid the risk of ineffectiveness caused by the lack of first-hand interactivity, I propose that the limitations of this research be thoroughly considered before execution of a future study. There is a need for a precisely developed survey instrument to evaluate the financial literacy and management skills of former and present minority small business owners. The instrument should be designed and enacted to measure variable characteristics and strengths that significantly contributed to the correlation in this study. This study with noted limitations has laid a foundation for further research and the possibility of new theory development in the field of financial management.

Implications

This quantitative research focused on a particular population and a specific social problem. The most important implication or suggestion via this study is to provide an empirical literary resource that contributes new research and theory in the field of management. This study examination of the minority background in pecuniary and business management literacy has revealed root issues that contribute to the problems addressed in this research. The significant correlation between financial illiteracy and minority small business failure engenders a platform for social change. With the evidential knowledge that a significant relationship does exist between the variables, decision-makers are empowered and equipped with additional information needed to formulate assistance and solutions to the problem. The positive social change implications are heightened towards public policymakers who are concerned with minority small business success, government agencies and practitioners that provide professional service and assistance through training and counseling, and financial institutions that are interested in providing capital funding. The study findings support the need for continued intervention of helping agencies, practitioners, and the strong support of lawmakers.

Based on the theories discussed in Chapter 2, I posit that financial illiteracy influences minority small business failure and will, therefore, have a direct effect on an individuals' ability to manage an organization successfully. In his examination of the effects of human capital in the United States, Becker noticed differences of impact among ethnic groups (Goldin, 2016). By acknowledging that formal education is not the only way to invest in human capital, and suggesting that on-the-job training is essential, Becker (2008) raised questions about unequal employment opportunities. The hypothesis testing confirms theorist Daniel Katz's belief that certain conceptual skills such as the ability to recognize ideas and theoretical concepts, relationships and human skills such as communicating, and decision-making should be familiar to all managers (Wiley-Cordone, 2013).

This study was a research extension of previous works of Lusardi (2010), Lusardi and Mitchell, (2011), and others but focused on minority Americans. The relevance and practical implications are, first, to provide minority entrepreneurs current knowledge of the state of the minority small business community in the context of financial literacy and business management. Second, the study provides evidence for use by stakeholders to develop curriculums, programs, and policy for practice. Last, the study may motivate future research concerning the issues of this study from differing perspectives all while helping to fill the gap in literary resources for future research to build upon.

Conclusions

Though this study reveals a significant correlation between financial illiteracy and minority business failure, ultimately, the success of minority small businesses rests in the hands of owners. The outcomes of this study illustrate that the lack of financial knowledge, correlated with poor financial or business management skills, often leads to exclusion, which compels behaviors such as high-interest credit card and payday lending usage that are in direct opposition of successful business behaviors. As a final note, if minorities are not afforded equal opportunities to obtain the financial and management skills needed to create business success, the minority business ownership ratio will continue to lag behind those of other entrepreneur groups. However, with relevant knowledge, that this and other studies provides minority small business owners and other stakeholders may be able to participate more equitably in business activities that garner success.

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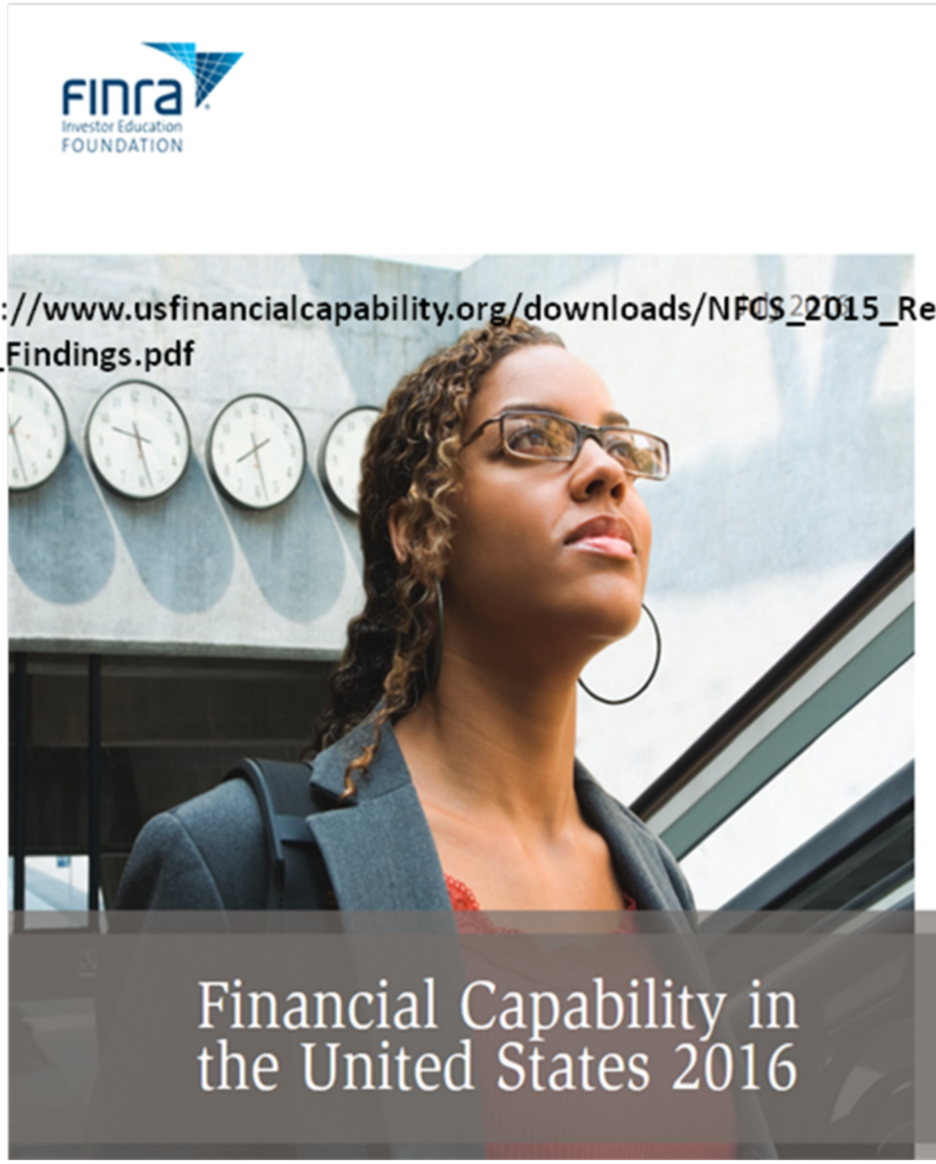
Appendix A: National Financial Capabilities Study 2015

https://www.usfinancialcapability.org/downloads/NFCS_2015_Report_Natl_Findings.pdf



Appendix B: Annual Survey of Entrepreneurs

Annual Survey of Entrepreneurs

The Annual Survey of Entrepreneurs (ASE) supplements the 5-year Survey of Business Owners (SBO) program and provides more timely updates on the status, nature, and scope of women-, minority-, and veteran-owned businesses.

Annual estimates are available on select economic and demographic characteristics of employer businesses and their owners by sector, sex, ethnicity, race, and veteran status for the nation, states, and the fifty most populous metropolitan statistical areas (MSAs).

Datasets include:

Company Summary. Provides data for employer businesses by sector, sex, ethnicity, race, veteran status, years in business, receipts size of firm, and employment size of firm for the U.S., states, and the fifty most populous metropolitan statistical areas (MSAs).

Characteristics of Businesses. Provides data for employer firms by sector, sex, ethnicity, race, veteran status, and years in business for the U.S., states, and fifty most populous MSAs, including detailed business characteristics.

Characteristics of Business Owners. Provides data for owners of respondent employer firms by sector, sex, ethnicity, race, veteran status, and years in business for the U.S., states, and top fifty most populous MSAs, including detailed owner characteristics.

Read more information about the ASE at www.census.gov/programs-surveys/ase/about.html. For a complete description of the ASE methodology, please visit www.census.gov/programs-surveys/ase/technical-documentation/methodology.html.

2015

The 2015 ASE asked questions on selected economic and demographic characteristics for businesses and business owners by sex, ethnicity, race, and veteran status, and introduced a new module of questions covering business management practices, types of workers, tasks performed by workers, and record keeping practices.

Company Summary

API Call: api.census.gov/data/2015/ase/csa.html

Examples: api.census.gov/data/2015/ase/csa/examples.html

Geographies: api.census.gov/data/2015/ase/csa/geography.html

Variables: api.census.gov/data/2015/ase/csa/variables.html

Example Call: US Level Employer firms' data:

api.census.gov/data/2015/ase/csa?get=NAME,NAICS2012,EMPSZFI,EMPSZFI_LABEL,FIRMPDEMP&for=us:*&key=YOUR_KEY_GOES_HERE

For detailed information about the values available, please see "Technical Information for ASE API – **Company Summary**."

Characteristics of Businesses

API Call: api.census.gov/data/2015/ase/cscb.html

Examples: api.census.gov/data/2015/ase/cscb/examples.html

Geographies: api.census.gov/data/2015/ase/cscb/geography.html

Variables: api.census.gov/data/2015/ase/cscb/variables.html

Example Call: US Level Employer firms' data for SPOUSES business characteristic:

api.census.gov/data/2015/ase/cscb?get=NAME,NAICS2012_LABEL,ASECB,ASECB_LABEL,SPOUSES,SPOUSES_LABEL,YEAR,FIRMPDEMP,FIRMPDEMP_PCT,RCPPDEMP,RCPPDEMP_F,RCPPDEMP_PCT,EMP,EMP_PCT,PAYANN,PAYANN_PCT,FIRMPDEMP_S,FIRMPDEMP_PCT_S,RCPPDEMP_S,RCPPDEMP_PCT_S,EMP_S,EMP_PCT_S,PAYANN_S,PAYANN_PCT_S&for=us:*&key=YOUR_KEY_GOES_HERE

For detailed information about the values available, please see "Technical Information for ASE API – **Characteristics of Businesses**."

Characteristics of Business Owners

API Call: api.census.gov/data/2015/ase/cscbo.html

Examples: api.census.gov/data/2015/ase/cscbo/examples.html

Geographies: api.census.gov/data/2015/ase/cscbo/geography.html

Variables: api.census.gov/data/2015/ase/cscbo/variables.html

Example Call: US Level Owners data for ACQBUS characteristic of business owners:
api.census.gov/data/2015/ase/cscbo?get=NAME,NAICS2012_LABEL,ASECBO,ASECBO_LABEL,ACQBUS,ACQBUS_LABEL,YEAR,OWNPDEMP,OWNPDEMP_PCT,OWNPDEMP_S,OWNPDEMP_PCT_S&for=us:*&key=YOUR_KEY_GOES_HERE

For detailed information about the values available, please see "Technical Information for ASE API – **Characteristics of Business Owners**."

Appendix C: Consumer Financial Literacy Survey Questions

Consumer Financial Literacy Survey Questions		
Q1 (Q3705)		Total 2015 %
Which of the following best describes how you manage your money?		Base: Adults 18+
Q2 (Q3710)		Total 2015 %
Which of the following best describes your financial situation?		Base: Adults 18+
Q3 (Q3715)		Total 2015 %
The last time you made a big financial decision (e.g., picking a credit card, buying a car, refinancing your mortgage), how confident were you that you made the right choice?		Base: Adults 18+
Q4 (Q3720)		Total 2015 %
Which of the following areas of personal finance currently worries you most?		Base: Adults 18+
Q5 (Q3725)		Total 2015 %
Do you have any savings, excluding retirement savings?		Base: Adults 18+
Q6 (Q3730)		Total 2015 %
Where do you save or invest your money? *		Base: Adults 18+
Q7 (Q3735)		Total 2015 %
On average, what percentage of your household’s income do you save every year for retirement?		Base: Adults 18+
Q8 (Q3740)		Total 2015 %
How confident are you that you are saving enough for retirement?		Base: Adults 18+
Q9 (Q3745)		Total 2015 %
Have you ordered a copy of your credit report in the past 12 months?		Base: Adults 18+
Q10 (Q3750)		Total 2015 %
Have you ordered or received your credit score in the past 12 months?		Base: Adults 18+
Q11 (Q3755)		Total 2015 %
Why did you order or receive your credit score(s) in the past 12 months? *		Base: Ordered or Received Credit Score in Past 12 Months
Q12 (Q3760)		Total 2015 %
Why haven’t you ordered or received your credit score(s) in the past 12 months?		Base: Did Not Order or Receive Credit Score in Past 12 Month
Q13 (Q3765)		Total 2015 %

Roughly how much credit card debt, if any, does your household carry from month to month?		Base: Adults 18+
Q14 (Q3770)		Total 2015 %
In the last 12 months, have you…? *		Base: Adults 18+
Q15 (Q3775)		Total 2015 %
Do you have a credit card that provides a free FICO score every month (i.e., as part of your monthly credit card statement, online through your credit card provider's website or mobile app)?		Base: Adults 18+
Q16 (Q3780)		Total 2015 %
How important is it to you to receive a free FICO score from your credit card bank or company?		Base: Adults 18+
Q17 (Q3785)		Total 2015 %
Compared to one year ago, how has the current economic climate affected your spending? Are you now spending…?		Base: Adults 18+
Q18 (Q3790)		Total 2015 %
Compared to one year ago, how has the current economic climate affected your saving habits? Are you now spending…?		Base: Adults 18+
Q19 (Q3795)		Total 2015 %
On a scale from A to F, what grade would you give yourself in terms of your knowledge about personal finance?		Base: Adults 18+
Q20 (Q3805)		Total 2015 %
If you were having financial problems related to debt, which of the following, if any, would you turn to for help first? Would you turn to…?		Base: Adults 18+
Q21 (Q3810)		Total 2015 %
How strongly do you agree or disagree with the following statement?		Base: Adults 18+
Q22 (Q3815)		Total 2015 %
How familiar, if at all, are you with the National Foundation for Credit Counseling, also known as NFCC?		Base: Adults 18+
Q23 (Q3820)		Total 2015 %
For which of the following reasons, if any, would you not reach out to a professional non-profit credit counseling agency for help if you were having financial problems related to debt? *		Base: Adults 18+
Q24 (Q3825)		Total 2015 %
Which of the following if any are true of your personal financial situation? *		Base: Adults 18+
Q25 (Q3830)		Total 2015 %
You indicated that you are currently re-paying your own or your child(ren)'s student loan(s). How, if at all, has your student loan debt impacted your overall personal financial situation? *		Base: Currently Repaying Student Loans

Q26 (Q3835)		Total 2015 %
Are you currently an active, enlisted member of the U.S. military?		Base: Adults 18+
Q27 (Q3840		Total 2015 %
In which branch or component of the military are you currently enlisted?		Base: Military

Appendix D: Annual Survey of Entrepreneurs Letter

ASE-L1
(02-23-2016)

DC

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau
Washington, DC 20233-0001
OFFICE OF THE DIRECTOR

A Message from the Director, U.S. Census Bureau:

Your business has been selected to participate in the **2015 Annual Survey of Entrepreneurs (ASE)**. The U.S. Census Bureau, in conjunction with the Ewing Marion Kauffman Foundation and the Minority Business Development Agency (MBDA), is conducting this survey. The ASE is an annual collection of information on the characteristics of U.S. businesses by ownership categories, i.e., by gender, ethnicity, race, and veteran status for employer businesses.

Please report online using the information below and keep this letter for future reference:

Website: **https://econhelp.census.gov/ase**
User ID:
Password:
Due Date:

Your response is required by law. Title 13, United States Code, Sections 8(b), 131 and 182 authorizes this collection. Sections 224 and 225 require your response. Section 9 of Title 13 requires that the Census Bureau keeps this report **strictly confidential**. The information you provide may be seen only by persons sworn to uphold the confidentiality of Census Bureau information and may be used only for statistical purposes. Further, copies retained in your files are immune from legal process. On behalf of the Secretary of Commerce, pursuant to Section 1(a)(3) of Executive Order 11625, the MBDA may enter into this agreement with the Census Bureau to establish a means for the development, collection, summation, and dissemination of information that will be helpful to persons and organizations throughout the nation in undertaking or promoting the establishment and successful operation of minority business enterprises.

We estimate the average time to complete this survey is 35 minutes. You may use reasonable estimates if book figures are not readily available. On the back of this letter, you will find disclosure descriptions regarding Office of Management and Budget number, authority and confidentiality and burden estimate statement.

If you need assistance completing the survey, visit us online at **https://econhelp.census.gov/ase**. For further assistance, please call our customer help line at 1-888-824-9954, Monday through Friday, 8 a.m. to 6 p.m., Eastern time. Si necesita ayuda, llame libre de cargos: 1-888-824-9954, de lunes a viernes, de 8 a.m. a 6 p.m., hora del Este.

Thank you in advance for your cooperation and ensuring that the results of the 2015 Annual Survey of Entrepreneurs are comprehensive, timely, and reliable. Your response makes a difference.

Sincerely,

John H. Thompson
Director
US Census Bureau

United States Census Bureau

census.gov

Appendix E: Variable Coding Guide

Variable Name	Question Content	Scores
Financial Literacy Scores	% Correct Answers	
1	M6) Interest Rate 5,788-.74 More than $102 =1 Exactly $102=2 Less than $102=3 Don't Know =98 Prefer not to say=99	1 2 3 98 99
2	M7) Inflation 4,553-.58 More than today=1 Exactly the same=2 Less than today=3 Don't know=98 Prefer not to say=99	1 2 3 98 99
3	M8) Bond Pricing 2,160-.27 They will rise=1 They will fall=2 They will stay the same=3 There is not relationship between bond price and the interest rate = 4 Don't know=98 Prefer not to say=99	1 2 3 4 98 99
4	M9) Mortgage 5,788-.74 True=1 False=2 Don't know=98 Prefer not to say=99	1 2 98 99
5	M10) Risk 3,550-.46 True=1 False=2 Don't know=98 Prefer not to say=99	1 2 98 99
6	M31) Interest compounded Less than 2 years=1 At least 2 yrs but less than 5 yrs=2 At least 5 yrs but less than 10 yrs=3 At least 10 yrs=4 Don't know=98 Prefer not to say=99	1 2 3 4 98 99
Business Failure Scores	Reasons for Failure	
1	J3) Cash Mgmt (cash flow) 11,128-.26 Spending less than income=1 Spending more than income=2 Spending about equal to income=3 Don't know=98 Prefer not to say=99	1 2 3 98 99
2	J30) Planning(system thinking) 14,191-.34	1 2

	The next few months=1 The next year=2 The next few years=3 The next 5 to 10 years=4 Longer than 10 years=5 Don’t know=98 Prefer not to say=99	3 4 5 98 99
3	B1/B2) Financial Reporting(Social Cap) 2,109-.05 Yes=1 No=2 Don’t Know=98 Prefer not to say=99	1 2 98 99
4	J32) Capital Structure(debit/credit) 1,264-.03 Very Bad=1 Bad=2 About avg=3 Good=4 Very Good=5 Don’t know=98 Prefer not to say=99	1 2 3 4 5 98 99
5	A5) Training/Education(human cap) <hs=1 HS/GED=2 Some College=3 AS=5 BA =6 Post Grad=7 Prefer not to say=99	1 2 3 5 6 7 99
	Total Scores	1152

Appendix F: Metropolitan Statistical Areas

MSA Code	TITLE
12060	Atlanta-Sandy Springs-Roswell, GA Metro Area
12420	Austin-Round Rock, TX Metro Area
12580	Baltimore-Columbia-Towson, MD Metro Area
13820	Birmingham-Hoover, AL Metro Area
14460	Boston-Cambridge-Newton, MA-NH Metro Area
15380	Buffalo-Cheektowaga-Niagara Falls, NY Metro Area
16740	Charlotte-Concord-Gastonia, NC-SC Metro Area
16980	Chicago-Naperville-Elgin, IL-IN-WI Metro Area
17140	Cincinnati, OH-KY-IN Metro Area
17460	Cleveland-Elyria, OH Metro Area
18140	Columbus, OH Metro Area
19100	Dallas-Fort Worth-Arlington, TX Metro Area
19740	Denver-Aurora-Lakewood, CO Metro Area
19820	Detroit-Warren-Dearborn, MI Metro Area
25540	Hartford-West Hartford-East Hartford, CT Metro Area
26420	Houston-The Woodlands-Sugar Land, TX Metro Area
26900	Indianapolis-Carmel-Anderson, IN Metro Area
27260	Jacksonville, FL Metro Area
28140	Kansas City, MO-KS Metro Area
29820	Las Vegas-Henderson-Paradise, NV Metro Area
31080	Los Angeles-Long Beach-Anaheim, CA Metro Area
31140	Louisville/Jefferson County, KY-IN Metro Area
32820	Memphis, TN-MS-AR Metro Area
33100	Miami-Fort Lauderdale-West Palm Beach, FL Metro Area
33340	Milwaukee-Waukesha-West Allis, WI Metro Area
33460	Minneapolis-St. Paul-Bloomington, MN-WI Metro Area
34980	Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area

35380	New Orleans-Metairie, LA Metro Area
35620	New York-Newark-Jersey City, NY-NJ-PA Metro Area
36420	Oklahoma City, OK Metro Area
36740	Orlando-Kissimmee-Sanford, FL Metro Area
37980	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metro Area
38060	Phoenix-Mesa-Scottsdale, AZ Metro Area
38300	Pittsburgh, PA Metro Area
38900	Portland-Vancouver-Hillsboro, OR-WA Metro Area
39300	Providence-Warwick, RI-MA Metro Area
39580	Raleigh, NC Metro Area
40060	Richmond, VA Metro Area
40140	Riverside-San Bernardino-Ontario, CA Metro Area
40900	Sacramento--Roseville--Arden-Arcade, CA Metro Area
41180	St. Louis, MO-IL Metro Area
41620	Salt Lake City, UT Metro Area
41700	San Antonio-New Braunfels, TX Metro Area
41740	San Diego-Carlsbad, CA Metro Area
41860	San Francisco-Oakland-Hayward, CA Metro Area
41940	San Jose-Sunnyvale-Santa Clara, CA Metro Area
42660	Seattle-Tacoma-Bellevue, WA Metro Area
45300	Tampa-St. Petersburg-Clearwater, FL Metro Area
47260	Virginia Beach-Norfolk-Newport News, VA-NC Metro Area
47900	Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area

Appendix G: Frequency Counts and Percentages for Variables (N = 111)

Minority Fin Lit Scores

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	9.00	5	4.5	4.5	4.5
	10.00	9	8.1	8.1	12.6
	11.00	12	10.8	10.8	23.4
	12.00	1	.9	.9	24.3
	13.00	4	3.6	3.6	27.9
	14.00	1	.9	.9	28.8
	15.00	3	2.7	2.7	31.5
	106.00	5	4.5	4.5	36.0
	107.00	5	4.5	4.5	40.5
	108.00	7	6.3	6.3	46.8
	109.00	4	3.6	3.6	50.5
	110.00	4	3.6	3.6	54.1
	112.00	1	.9	.9	55.0
	200.00	2	1.8	1.8	56.8
	202.00	3	2.7	2.7	59.5
	203.00	6	5.4	5.4	64.9
	204.00	2	1.8	1.8	66.7
	205.00	2	1.8	1.8	68.5
	206.00	1	.9	.9	69.4
	207.00	1	.9	.9	70.3
	298.00	2	1.8	1.8	72.1
	299.00	4	3.6	3.6	75.7
	300.00	1	.9	.9	76.6
	301.00	2	1.8	1.8	78.4
	394.00	2	1.8	1.8	80.2
	395.00	1	.9	.9	81.1
	396.00	4	3.6	3.6	84.7
	397.00	2	1.8	1.8	86.5
	398.00	2	1.8	1.8	88.3
	401.00	1	.9	.9	89.2
	491.00	3	2.7	2.7	91.9
	492.00	2	1.8	1.8	93.7
	494.00	1	.9	.9	94.6
	588.00	5	4.5	4.5	99.1
	594.00	1	.9	.9	100.0
	Total	111	100.0	100.0	

Minority Busi Failure Scores

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8.00	1	.9	.9	.9
	9.00	1	.9	.9	1.8
	10.00	4	3.6	3.6	5.4
	11.00	7	6.3	6.3	11.7
	12.00	3	2.7	2.7	14.4
	13.00	4	3.6	3.6	18.0
	14.00	14	12.6	12.6	30.6
	15.00	8	7.2	7.2	37.8
	16.00	10	9.0	9.0	46.8
	17.00	9	8.1	8.1	55.0
	18.00	11	9.9	9.9	64.9
	19.00	4	3.6	3.6	68.5
	20.00	4	3.6	3.6	72.1
	106.00	2	1.8	1.8	73.9
	107.00	1	.9	.9	74.8
	108.00	5	4.5	4.5	79.3
	109.00	2	1.8	1.8	81.1
	110.00	4	3.6	3.6	84.7
	111.00	2	1.8	1.8	86.5
	112.00	4	3.6	3.6	90.1
	113.00	5	4.5	4.5	94.6
	114.00	2	1.8	1.8	96.4
	201.00	1	.9	.9	97.3
	205.00	1	.9	.9	98.2
	207.00	1	.9	.9	99.1
	212.00	1	.9	.9	100.0
	Total	111	100.0	100.0	