THE IMPACT OF SOCIAL CAPITAL, FINANCIAL KNOWLEDGE, SKILL, AND ATTITUDES ON FINANCIAL WELL-BEING ACROSS FEDERAL POVERTY LEVEL STATUS

MICHAEL G. THOMAS JR.

(Under the Direction of Lance Palmer)

Abstract

U.S. households vary dramatically in their financial well-being. Numerous studies demonstrate the impact of resources (e.g., income and savings), knowledge, and behaviors in a given household's financial outcomes. Extant literature tends to focus on individual financial and psychological factors with relatively little focus on the social context in which the household resides. As a consequence, the literature is often prescriptive in the way it addresses sub-optimal financial decision-making as it relates to low-income households. Social capital, associated with notions of trust, the exchange of information, and the upholding of explicit and implicit social contracts, is one sociological factor found to have relationships with household outcomes and well-being in other domains such as health. Trust, dissemination of information, and social contracts have also been explored in the literature from the lens of bonding, bridging and linking capital. Bonding, bridging and liking capital represent the types of relationships a household has with various members of its community. Some studies suggest that social capital in general or the diversity of social networks (e.g. bonding, bridging and linking capital) varies across poverty level status and may explain favorable life outcomes or a household's ability to navigate

financial hardship. No study was found that examines the role of social capital in financial well-being across federal poverty level status or how it might influence the relationships between financial knowledge, skill, attitudes and well-being. Using data from the 2016 Consumer Financial Protection Bureau (CFPB) Financial Well-Being Survey, this dissertation will explore the use of social capital (i.e., bonding, bridging and linking capital) to explain variation in financial well-being within a federal poverty level controlling for financial knowledge, financial skill, and financial attitudes. Findings from this study demonstrate the importance of social networks, in maintaining financial well-being, for households above 200% of the federal poverty level status. Social capital did not have a significant impact on the financial well-being of households below 200% of the federal poverty level.

Keywords: *Financial Knowledge, Financial Well-Being, Financial Skill, Financial Attitudes, Social Capital, Federal Poverty Level*

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Dedication

I would like to dedicate my dissertation to my late sister, Tiara Tenee Thomas, whose spirit served as a source of inspiration and strength. I would also like to dedicate this work to my wife—Ashlee Thomas. You saw this happening well before I did. And, lastly, I would like to dedicate this effort to my boys —Triston and Sebastian. I hope that by modeling faith, love, integrity, and perseverance through this process, you will be encouraged to fearlessly pursue your own life-giving endeavors and know that you do not have to be endowed with extraordinary ability to achieve wondrous things in life. You just have to trust that you are enough. You are enough!

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First and foremost, I would like to acknowledge my Lord and Savior Jesus Christ. Through him all things are possible. This has certainly been the case for me. I would not be here without being anchored to something that I hold dearly—faith. For every doubt I could conjure up in my mind, God had a promise. After a while, I chose to start listening to those promises. And that decision has made all the difference.

I would also like to acknowledge my wife, Ashlee Thomas. She has been incredibly gracious and generous of her time to allow me the space to pursue what I believe is my calling in life. In fact, she saw the end before I did. She recognized my capacity to accomplish this goal well before I brought the idea to her attention. As often stated in my small group, men have sight and women have insight. I am deeply grateful for your insight. Without it, I would have never endeavored to do what I have accomplished.

My mother, Lisa Mays, also deserves a great deal of praise. She has been through so much and deserves more than I can ever dream of giving her. Life for her has not been a crystal staircase, but she always finds a way to make the most, or best, out of every situation. It is because of her that I have the ability to keep pressing forward when life feels as if it is conspiring against you. What I have learned, more than anything else, is that the sun shines to reveal the brilliance of life. This achievement reflects the glow of the sun only because I chose to labor, optimistically, in the cover of cloudy and darkened skies. Thank you for always believing that I

was more than my report cards or what my teachers had to say about me during parent student-teacher conferences. Thank you for your perseverance with life and me.

Beyond my family, there are others who have shown me a great deal of grace and empathy while clearing this path. Dr. Lance Palmer, my major professor, is one of these individuals. His quiet and unassuming presence is one that I deeply admire. He gives of himself unselfishly and truly wants the best for those he serves. Despite the many ups and downs I have experienced along this journey, he has never once wavered in my ability to finish it.

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There are so many people I would like to acknowledge, but it would be impossible to name every student, client, friend, staff/faculty member, colleague, and friend that has encouraged me along the way. To all of you, I want to be very clear that I am not achieving this accomplishment because I am the smartest or most ambitious person in the room. There are countless times when I have doubted my own ability. There are times when I felt like giving up. What I had to realize along the way was that there is no such thing as failure when a community supports you. In every setback, doubt or fear, there is an opportunity for the community to dust you off, sow seeds of encouragement, and redirect you on a clearer path towards your goals. Thank you for being a part of my community.

TABLE OF CONTENTS

List of Figures

List of Tables

CHAPTER 1

INTRODUCTION

Background of Study

Economic hardship at the household level has become a focal point of the national conversation. The not too distant 2008 economic crash, rising costs (i.e., food, shelter, healthcare, and ballooning student loan debt) and wage stagnation have contributed to financial instability across the U.S. Trending national headlines on rising childcare costs, the perils of medical debt and unaffordable housing continue to bring light to the fact that people are hurting. In fact, poverty is an issue that is affecting roughly 30 million people in the U.S (U.S. Census Bureau, 2017). Research in this area has found that low-income households are more likely to experience higher levels of cognitive overload (Adamkovic & Martoncik, 2017), which means that the impact of negative experiences and stressors have more of an impact on this population than others. Haushofer and Fehr (2014) note that these negative effects and stressors may have an adverse effect on mental health that then leads to suboptimal decision making.

Tepper (2018) and the Federal Reserve (2017a) found that roughly 40% of American households do not have the cash reserves on hand to cover an unexpected financial emergency. In fact, unexpected medical debt has been reported to have a costly consequence on household finances. Himmelstein et al. reported that nearly 66.5% of households file bankruptcy due to related medical expenses. As it relates to other unexpected expenses, American households were most likely to pay for those expenses by using a credit card, borrowing from a friend, or taking out a personal loan (Tepper, 2018). The FINRA Financial Capability (2016) study, which

surveyed nearly 250,000 Americans, found that roughly 52% of Americans find it difficult to make ends meet.

To address this concern, there has been a public outcry for a more concerted effort to address these issues through financial literacy. As a consequence, nationally syndicated radio show personalities such as Clark Howard or Dave Ramsey have grown in popularity. Financial literacy programs like MoneyWi$e and America Saves continue to gain support and praise for their work in promoting financial literacy. Advocates of financial literacy believe that educating households on personal finance topics such as budgeting, debt/risk management and investing (Remund, 2010) will lead to favorable financial outcomes.

The assumption that improvements in financial knowledge have a direct and positive association on financial outcomes in the research is mixed. Many, however, support this assertion. Studies have shown that financial knowledge is associated with positive effects on personal savings (Jappelli & Padula, 2013), stock market participation (van Rooij, Lusardi, & Alessie, 2011), credit card behavior (Xiao, Serido, & Shim, 2012), and appropriate use of debt (Stango & Zinman, 2009). Researchers have also found that low levels of financial literacy lead to suboptimal financial decision-making (Choi et al., 2011; von Gaudecker, 2015).

On the other hand, more and more studies are starting to emerge that refute the notion of an association between financial knowledge and financial outcomes. Collins and O'Rourke (2001) propose that issues of heterogeneity, lack of standardization and selection bias make financial literacy outcomes inconclusive with regards to their effectiveness. Willis (2011) adds that along with heterogeneity in circumstances and values of a population financial literacy is not an effective strategy to address financial behavioral change due to biases, heuristics, and costs.

Other researchers have produced similar findings (Cole & Shastry, 2008; Gale & Levine, 2010). Collins and O-Rourke (2010) state that issues of heterogeneity, lack of standardization. Fernandes, Lynch and Netemeyer (2014), found that the effects of financial literacy intervention on financial behaviors diminish when controls are in place for psychological traits. Other researchers have argued a similar sentiment in that financial literacy is extremely objective and does not capture individual cognitions (Willis, 2011; Porto & Xiao, 2015). These cognitions or psychological traits are reflective of the five major personalities: openness, conscientiousness, extroversion, agreeableness, and neuroticism. Financial literacy efforts have been focused on improving household financial knowledge without very little consideration of other factors that may impact household financial behaviors.

Furthermore, these psychological traits are influenced by social capital. Social capital is an important and often overlooked contextual framework. It provides context to the "Why" behind financial household decision-making. Duckworth and Heckman (2011) posit that personality types are derived from preferences, constraints and information. These factors are reflected in the constructs of social capital theory. Huhmann and McQuitty (2009) support this argument in their assertion that access to information and financial constraints play a significant role in whether or not a household has exposure to the appropriate information, products, and services necessary to optimize their financial outcomes. A meta-analysis of 126 evaluation studies showed that financial literacy efforts were less effective for low-income households when compared with households with moderate levels of income or higher (Kaiser, 2017). This finding, as well as those previously discussed, brings to light that the debate on the effectiveness of financial literacy efforts is mixed and that context matters— especially for low-income households.

Unfortunately, low-income households are most severely affected by these circumstances. Income constraints combined with unexpected financial shocks make this population more likely to borrow at expensive rates (Agarwal & Mazumder, 2013; Zinman, 2015). Households that lack access to the commercial credit market, whether due to poor credit history, being unbanked or banking deserts, have increased their use of alternative financial services (AFS) over the past two decades (Lusardi & Scheresberg, 2013). Despite the momentary relief they may bring to households, these services tend to compound the financial hardship of a low-income household. The usury rates on AFS transactions (i.e. pawn shops, title loans, and payday lenders) – upwards of 400% - have become so prevalent that the CFPB (2017) proposed new legislation to protect consumers from abusive lending practices. High credit card balances and interest rates (Weller, 2006), as well as the use of AFS, disproportionately affects low-income households (Federal Reserve, 2017a).

Moreover, poverty is an issue that is affecting roughly 30 million people in the U.S (U.S. Census Bureau, 2017). Research in this area has found that low-income households are more likely to experience higher levels of cognitive overload (Adamkovic & Martoncik, 2017), which means that the impact of negative experiences and stressors have more of an impact on this population than others. Haushofer and Fehr (2014) note that these negative effects and stressors may have an adverse effect on mental health, which then leads to suboptimal decision making.

Studies consistently show this to be the case as low-income households are more susceptible to using suboptimal alternative financial services such as payday loans, check cashing services, and subprime credit cards (Carvalho, Meier, & Wang, 2016). As noted by Martin (2017), low-income communities, generally, have lower financial literacy scores and are more likely to make financial mistakes than households that are not. The poor are expected to

behave differently than those who are not poor and should be viewed with a different lens when comparing the financial fragility of households across socio-economic status. Shafir (2017) notes that cognitive judgment is impaired by the poverty context due to the psychology of scarcity. Understanding the context in which a household must make financial decisions is imperative to the promotion of financial well-being.

Context, although sparsely addressed in the financial literacy literature, is thoroughly covered in other disciplines under the construct of social capital. Social capital, in its seminal work, is defined as the interaction between actors that facilitates action through the communal structures of reciprocity, information channels, and social norms (Coleman, 1988). Reciprocity represents the establishment of goodwill between two persons that is used as a type of currency the can be called upon in one's time of need. Information channels are the way in which information is exchanged within a community and the types of information exchanged. Social norms represent the systems in place to ensure that established community dynamics are reinforced.

Since the work of Coleman, social capital has been further refined through the introduction of bonding, bridging, and linking capital (Putnam, 2000). These added dimensions make it possible to understand the relationship that households have with the different types of relationships it has within its community. Bonding capital is reflective of close/informal relationships; bridging capital is reflective of semi-formal relationships with associates and community-based organizations; linking capital is reflective of formal relationships through the banking system, professional services and the federal government (Putnam, 2000).

As such, the community in which a household resides and the types of relations it has is associated with personality, attitudes, and behaviors. Notions of trust, the exchange of

information, and the upholding of explicit and implicit social contracts impact these psychological factors. In the health discipline, high levels of social capital have been positively associated with positive health outcomes (Basset & Moore, 2013; Murayama, Fujiwara, & Kawachi, 2012; Vyncke et al., 2013). Social capital has also been found to be positively correlated with upward mobility (Dominguez & Watkins, 2003; Mitra, 2008; Oishi, Koo, & Buttrick, 2018) and well-being (Helliwell, 2006). Thus community dynamics produce culture. And the culture of a community is associated with household outcomes (Huhmann & McQuitty, 2009). The context in which households are required to make daily financial choices matters just as much as other factors often researched in the literature.

The Purpose and Justification of the Study

The purpose of this research is to understand the direct effect that social capital has on financial well-being across federal poverty level status while controlling for covariates already established in the literature (i.e., financial knowledge, skill and attitudes). There is currently no literature that explores the impact of social capital and federal poverty level on financial well-being in this way. This study will be the first to incorporate dimensions of social capital (e.g. bonding, bridging and linking capital) in the way that financial well-being is understood.

Given that financial literacy research tends to focus on general populations or convenience samples (Huston, 2010), the emphasis on FPL will provide meaningful insights and context that are not currently prevalent in the literature. Given that low-income households are hardest hit when it comes to dealing with information asymmetry in the markets, the utilization of costly debt, and the negative impact of economic downturns, there are plenty of opportunities to expand upon the current literature by developing a deeper understanding of low-income households and how to most effectively improve their financial well-being.

To accomplish this, I will utilize the Consumer Financial Protection Bureau (CFPB) financial well-being data set. The cross-sectional data were collected between October and December 2016 through an online sample. The total weighted sample is 6,394 U.S. adults. STATA, version 14, will be used for the data analysis. Ordinary least square (OLS) regression analysis will be used for the statistical analysis.

In the chapters to come, the dissertation will be laid out in the following order. Chapter 2 will provide a literature review of financial literacy, financial well-being, and social capital. Chapter 3 will cover the methodologies used to conduct the research. Chapter 4 will provide an analysis of the results from the data analysis. Chapter 5 will discuss the implications and limitations of the findings.

CHAPTER 2

LITERATURE REVIEW

In this section, literature related to financial literacy, financial well-being, and social capital is reviewed. Each section covers the origins of a given construct, developments in its definition and operationalization, and empirical findings. These elements are vital to the empirical design of this study as financial literacy interventions are established under the premise that financial knowledge is positively associated with improving financial behaviors. And that financial behaviors are positively associated with overall financial well-being.

Huston's (2010) financial literacy model (Figure 1) is an excellent example of the financial decision-making process. The model consists of factors such as human capital (i.e., endowed ability), personal finance education (i.e., financial literacy education), financial literacy, other influences (i.e., attitudes, economic conditions, and behavioral bias), personal finance behaviors, and financial well-being. Financial well-being, per the model, is defined as the "increase [in] expected lifetime utility" (Huston, 2010, p. 307). Each component of the model serves as a pathway that ultimately leads to an effect on an individual's perceived level of financial well-being.

Moreover, Huston's model depicts a person's level of financial literacy as a combination of human capital and personal finance education. Human capital is reflective of one's endowed ability and capacity to learn new things or complex material. Personal finance education represents one's life experiences or access to more formal financial literacy education. The interaction of these two components represents one's level of financial literacy which directly

impacts one's personal finance behaviors. Lacking in endowed ability does not have to be a barrier to achieving high levels of financial literacy. Huston (2010) argues that even if someone lacks numeracy ability, technology makes it easier than ever to overcome that or other deficiencies. Financial literacy as defined by the model is one's unique understanding of the core financial literacy skills. The most oft-cited core financial literacy concepts are cash flow management, debt management, and risk management (Remund, 2010). Among those, financial education content pertaining to savings and investing behavior is most frequently used across interventions (Huston, 2010). As a consequence, financial knowledge plays a significant role in the way the current literature on financial literacy effects financial well-being.

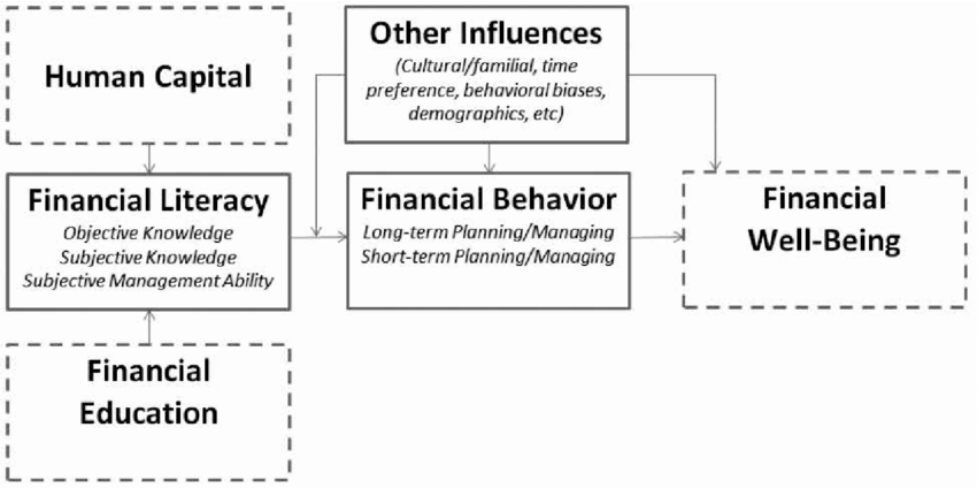

Figure 1: Relations among Financial Literacy, Knowledge, Education, Behavior and Well-Being

Financial Literacy Literature Review

Financial literacy efforts date as far back as the 1950s and 1960s. States began to mandate initiatives that would promote financial and consumer education in high schools (Gale & Levine, 2011). A refocus on financial and consumer education spurred a resurgence in the 1990s. The Jump$tart Coalition started the first significant initiative to improve the financial

literacy of high school students in 1997. Other efforts were created to address financial literacy more broadly. The Department of Treasury established an Office of Financial Education in 2002. The Financial Literacy and Education Commission followed that initiative in 2003. Researchers, soon after, began recognizing and drawing attention to the general lack of financial literacy levels in the U.S. (Bernheim, 1998; Hogarth & Hilgert, 2002). Bernheim (1998) was among the first to express that savers and investors lacked financial literacy about the products in which they invested their money. Hilgert and Hogarth (2002) verified that the majority of the U.S. population lacked in financial literacy. In conjunction with these findings, the National Council of Economic Education (NCEE, 2005) created a survey to assess the U.S. population's knowledge of economics and personal finance. Within the 24-item questionnaire were questions ranging from economics and the consumer to personal finance. Respondents scored poorly in the financial management sections. Adults, on average, scored a grade of a C while high school students fared much by worse with an average score of 53—an F. (Lusardi & Mitchell, 2006). Clearly, U.S. residents needed help.

From that point forward, a multitude of studies have come forth to demonstrate a need for and the benefit of greater financial literacy amongst consumers (Choi, Laibson, & Madrian, 2011; Hilgert, Hogarth & Beverly, 2003; Lusardi & Mitchell, 2006 and 2007b; Hastings, Mitchell, and Chyn, 2011; van Rooij et al., 2011; von Gaudecker, 2015). These gaps in knowledge, as reported by many financial literacy researchers, make it difficult for the general population — let alone low-income households— to make financially optimal decisions in a complex and ever-changing economic landscape. Choi, Laibson, and Madrian (2011) found that low financial literacy is associated with suboptimal financial decisions. Lusardi (2009) found that individuals with low levels of financial literacy were less likely to engage with the financial

markets. Low levels of financial literacy are such a concern that the inability to understand and make wise consumer choices within a complex and ever-changing economic landscape can prove to be disastrous for financially vulnerable populations (Consumer Bankers Association, 2003; National Endowment for Financial Education, 2006). Hastings, Madrian, and Skimmyhorn (2013) go on to say that "a lack of financial literacy is problematic if it renders individuals unable to optimize their own welfare" (p. 4). The negative consequences of poor financial literacy came to a head in 2008. Many families were unable to handle the unexpected financial shock of the economic downturn (Cole, Sampson, & Zia, 2011; Drexler, Fischer, & Schoar, 2014; Gibson, McKenzie, & Zia, 2014; Sayinzoga, Bulte, & Lensink. 2016). The financial literacy literature suggests that there is a negative correlation between low financial literacy (knowledge) and the optimization of favorable behavioral outcomes (Agarwal & Mazumder, 2013; Gathergood, 2012; Gerardi, Goette, & Meier 2013; Stango & Zinman, 2009; Zinman, 2015.) There is a clear need for greater financial literacy, and this is especially true for individuals who are low income or grappling with a sudden economic downturn.

What is Financial Literacy?

The federal government along with a countless number of other organizations and nonprofits has worked diligently to address the issue of financial literacy. Agencies and organizations such as the Consumer Financial Protection Bureau (CFPB), Federal Deposit Insurance Corporation (FDIC), National Endowment for Financial Education (NEFE), Jump$tart Coalition, and America Saves, to name a few, have worked toward ensuring that individuals and families are equipped with the necessary tools to make sound financial decisions. Nonetheless, as Remund (2010) explains, the notion of how to define and accurately measure financial literacy efforts continues to be up for debate amidst the rallying cry to address the issue. Creating a

financial literacy definition is so much of a task that the first federal initiative established in 2006 to discuss financial literacy did not formalize a definition until 2009 (Remund, 2010). The inability to formalize a financial literacy definition has been a challenge for researchers. In a study conducted by Huston (2010), only 13% of the 72 financial literacy studies reviewed included a definition of financial literacy. Huston (2010) also found that 68% of the studies were generalizable in scope and that 9 out of the 10 studies conducted did not provide a rating system to analyze their findings. Because of the shortage of clearly-defined financial literacy definitions in the literature, its meaning takes on many forms from organization to organization.

The U.S. House of Representatives and Financial Services Committee (2009) defined financial literacy as a way to promote better outcomes through improved financial decision making. The Financial Capability Task Force (2013), under the direction of former president Barack Obama, defined financial literacy as the capacity based on skills and access to financial services to effectively manage one's financial resources at various touch points in one's life (e.g., pre-school and workplace interventions). With regard to other community-based organizations and nonprofits, there are subtle differences in the way financial literacy has been defined as well. The Jump$tart Coalition (Huston, 2010) defined financial literacy as an individual's ability to utilize financial resources and make informed decisions over his or her lifetime. The Federal Deposit Insurance Corporation (2018) views financial literacy as financial education that improves an individual's financial skills and the promotion of healthy banking relationships.

Researchers also have slight differences of opinion when it comes to defining financial literacy. Remund (2010) views financial literacy as one's competency with regard to managing his or her financial affairs. Others consider financial literacy as the ability to make informed decisions (Beal & Delpachitra, 2003; Noctor, Stoney, & Stradling, 1992). Some define financial

literacy as the ability to read, analyze, manage and communicate personal money related matters (Cude et al., 2006; Vitt et al., 2000). A person's ability to perform math computations has been viewed as a vital element of financial literacy (Huhmann & McQuitty, 2009; Krische, 2014) as well as more subjective measures with regard to confidence and a sense of well-being (Joo & Grable, 2004; Kushman & Ranney, 1990; Van Praag & Frijiters, 1999).

Although each definition concludes with reaching a similar end, there is still a wide range of variability in the way financial literacy is defined (Huston, 2010). The slight differences in language from one definition to the next adds very subtle complexities to how each definition is operationalized and measured in a more practical sense (Hensley, 2015; Huston, 2010). These subtleties make it difficult to compare financial literacy interventions. For instance, when assessing the impact of knowledge on financial well-being, would a financial literacy intervention that does not value numeracy and subjective well-being be constructed similarly to one that does? Alternatively, would a financial literacy intervention centered on current decision making resemble one that looks at financial decision making over one's life-cycle? In all likelihood these interventions—although similar—would be created and delivered in different ways. As noted by Knoll and Houts (2012), "Meaningful comparisons across surveys [are] extremely difficult, as the metric on which financial literacy is being assessed is not consistent from study to study" (p. 385). The variability in financial literacy definitions from the federal to community-based level indelibly impacts theoretical frameworks used in the implementation.

Harkening back to the work of Huston (2010), there were no findings presented that quantified the use or presence of conceptual frameworks in the review of 71 articles on financial literacy intervention. The absence of such information speaks to a lack of conformity and consistency with regard to a financial literacy definition and the resulting outreach efforts.

Financial literacy interventions have been found to have a significant but small effect on intervention outcomes (Fernandes et al., 2014). Consequently, financial literacy efforts have struggled to standardize how participants make the jump from financial literacy to behavioral change (Collins & Holden, 2014).

Moreover, the lack of evidence of a clearly defined theoretical framework from which to operationalize a formal definition and thus an evidence-based intervention does not mean that a theoretical lens is not implicitly influencing financial literacy definitions and outreach development. Many organizations and researchers either consciously or unconsciously subscribe to a classical economic approach of improving economic well-being. When considering the origins of budgeting and debt management, these skills were taught in the field of home economics established initially by Margaret Reid and Dorothy S. Brady in the 1930s (Overton, 2008). The underlying theoretical framework for home economics is rooted in rational behavioral theory. As such, individuals are expected to behave rationally to optimize their utility. In Becker's (1974) work about the new home economics, households were viewed as production and consumption units. As such, households were expected to operate in a logical fashion to maximize utility. When considering many of the definitions as mentioned above of financial literacy, improving financial literacy is consistently viewed as an optimal way to enhance overall financial well-being. The underlying assumption is that households are to behave rationally once they have received an input, financial knowledge, to improve productivity and curb consumption.

At present, financial literacy efforts are still working towards the development of a theoretical lens to help cultivate a clear and consistent financial literacy definition. The lack of applicable theory and decided upon financial literacy definition leads to diffuse efforts and a

cornucopia of perspectives and findings in understanding financial literacy's impact on both knowledge and behavioral change. As stated by Remund (2010), "Until the research community embraces a common foundation, the value of empirical studies and education programs will remain compromised" (p. 278). Regardless, initiatives aimed at addressing the need for greater financial literacy are moving full steam ahead.

Some researchers have gone beyond the lens of classical economics and have embraced that people do not always make optimal financial decisions. There are subjectivity and nuance with regard to the financial choices that households make. The new literature on behavioral finance has brought new light to the complexities of human decision-making. Kahneman and Tversky (1979), widely considered to be the forefathers of behavioral economics, found in their seminal work on prospect theory that individuals do not always act or respond rationally when making choices under uncertainty. They go on to suggest that " the location of the [a person's] reference point and the manner in which choice problems are coded and edited emerge as critical factors in the analysis of decision making" (Kahneman & Tversky, 1979, p. 288). In other words, rationality is bounded because individuals seek to make satisfactory decisions as opposed to optimal decisions given constraints on time, the fashion in which information is presented and one's cognitive abilities (Simon, 1986).What is rational is highly subjective given a household's circumstances. Having this understanding of the complexities of consumer decision-making, the Financial Capability Task Force (2013) proposed the utilization of choice architecture principles expressed in the "Save More Tomorrow" work first published by Thaler and Benartzi (2004). The Save More Tomorrow concept takes an in-depth look at behavioral factors that influence consumer decision-making and how to mitigate suboptimal financial idiosyncrasies through the presentation of information — acknowledging behavioral finance's theoretical perspectives at the

federal level signals that policymakers are aware that information in and of itself is not enough to improve financial stability. The presentation of knowledge also has a significant impact on consumer outcomes.

Although psychographic variables (i.e., beliefs, attitudes and goals, confidence) have been overlooked in the past (Huhmann & McQuitty, 2009), organizations and researchers are starting to incorporate these subjective measures into the way financial literacy interventions are created and assessed. This approach is reflective of the advances made in the public health literature. Public health outreach initiatives have switched their focus from an information dissemination process to a behavioral change focus. Theoretical perspectives such as the theories of planned behavior (Ajzen, 1991) and reasoned action (Fishbein & Ajzen, 1975) take into account the impact that psychographic variables (e.g., intentions, religion, race, time preference, and social norms) have on financial outcomes. Huston (2015), seeing the value of a more holistic financial literacy approach, proposed the use of a financial health model to shape the way in which financial organizations and researchers define and assess financial literacy outreach efforts.

Despite the lack of a clear financial literacy theoretical framework and definition, the vast majority of financial literacy outreach efforts are consistent in offering financial literacy education in one or all of the following content areas: money basics (e.g., time value of money and purchasing power), budgeting, borrowing (debt management), and savings and investing (Huston, 2010; Remund, 2010). Financial literacy programs may extend beyond these topics into other areas such as home buying programs (National Endowment for Financial Education 2006; National Foundation for Credit Counseling 2008) and risk management (Chen & Volpe, 2002; Morton, 2005; Wi$eUp, 2008. Content within a financial literacy curriculum and the degree to

which it is taught varies from intervention to intervention. Although it is difficult to compare financial literacy efforts across studies, the research has shown signs of effectiveness.

Effectiveness of Financial Literacy Efforts

Given the research findings on how low financial literacy affects households, efforts designed to promote literacy has proven to be effective in several domains. One of the most prominent areas of financial literacy research focuses on investment behaviors. Given the seismic shift from defined benefit plans (i.e., investment savings that are established and funded by the employer) to defined contribution plans (i.e., investment savings that are established and funded by the employee), the responsibility for creating substantial retirement is mostly the responsibility of the consumer (Poterba et al., 2007). Social Security serves as a financial safety net but only in the form of a supplement to what older Americans can rely on in the way of a pension.

Von Gaudecker (2015) found that individuals with higher levels of financial literacy earn 50 basis points higher on their investments than individuals with lower levels of financial literacy. In fact, a study conducted by Allen, Clark, Maki, and Morrill (2015) reported that individuals who participated in employer-sponsored seminars improved their knowledge and had higher participation rates in the company's defined contribution plan compared with those who did not participate. Clark, Lusardi, and Mitchell (2017) found that increases in financial literacy encouraged individuals to boost their equity holdings within their portfolio, which resulted in returns of 2.3% when compared to their previous baseline earnings.

Financial literacy efforts are not focused primarily on investment activities. Research has found that higher levels of financial literacy can encourage households to save, avoid risky lending services, pay bills on time and budget their resources (Hilgert et al., 2003; Jappelli &

Padula, 2013; Kim & Lee, 2018). Credit card management has also been shown to improve with higher levels of financial literacy (Disney & Gathergood 2013; Mottola, 2013; Norvilitis et al., 2006; Xiao & Shim, 2012). With regard to subjective measures, studies have shown that higher levels of financial literacy were linked to higher levels of individual measures of financial well-being and overall financial satisfaction (Ali, Rahman, & Bakkar, 2014; Xiao, Chen, & Chen, 2014).

Lack of Evidence to Support the Effectiveness of Financial Literacy

Despite these research findings, financial literacy levels have slipped since the mid-1990s (Lusardi, 2015). Savings rates in the U.S. were near 0% before the 2008 economic recession (U.S. Department of Commerce, Bureau of Economic Analysis, 2008). Consequently, many researchers have questioned the efficacy of knowledge and financial literacy intervention. Mandell (2004) argued that financial literacy efforts do not improve the financial literacy scores of high school students. Moreover, the questions most commonly used to assess financial literacy do not overlap with the educational curriculum and assessments of Jump$tart (Mandell, 2009). More recently, Fernandes et al. (2014) conducted a meta-analysis of financial literacy research and found that financial literacy interventions have a relatively small effect size and the impact of such efforts had a diminishing effect over time. The researchers go on to argue that measuring the impact of financial literacy interventions is difficult given that many financial literacy efforts are operationalized utilizing different definitions (Fernandes et al., 2014; Huston, 2010).

Researchers today also recognize that knowledge alone cannot improve behavior, and increasingly turn to subjective measures to understand financial decision-making. Collins and Holden (2014) shared the same sentiment in their assessment of financial literacy's inability to affect behavioral change. Other researchers have found poor linkages between financial literacy

and behavioral outcomes concerning adult populations (Carpena, Cole, Shapiro, & Zia, 2011; Cole & Shastry, 2008; Willis, 2009) as well as when working with high school students (Mandell, 2004). The issue of ineffective measurement is not exclusively related to objective measures. Porto and Xiao (2016) suggested that information asymmetry, nontraditional behaviors, and heuristics rather than low levels of financial literacy influences consumer behavior. Whether the discrepancies arise from the lack of a formalized definition, theoretical framework, or the inability to assess subjective influences, our understanding of the effectiveness of financial literacy as an influence on consumer behavior is still evolving.

Financial Literacy Measurement

Measuring financial literacy efforts without a formalized and universally accepted theoretical framework and definition is a difficult task. There is not a well-established and transparent way to evaluate the effectiveness of interventions (Hensley, 2015; Fernandes et al., 2014). Huston (2010) found that 88% of the studies reviewed did not provide a rating system to assess whether an individual was financially literate. Nonetheless, the three question Lusardi and Mitchell scale has become ubiquitous in its use to measure an individual's or household's level of financial literary despite concerns about the assessment's ability to fully capture financial literacy (Henager & Cude, 2014; Knoll & Houts, 2012).

The Lusardi and Mitchell financial literacy questions, created initially for use in the 2004 U.S. Health and Retirement Study (HRS), test one's ability to answer questions about compounding interest, the effects of diversification, and inflation. Lusardi and Mitchell's initial questions were influenced by the definition set by the Organization for Economic Cooperation and Development (2005):

> "The process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction, and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being."

The Lusardi and Mitchell questions have become very popular, and are now frequently used by researchers in national surveys. The items were included in the National Longitudinal Survey of Youth (Lusardi, Mitchell, & Curto (2010); the RAND American Life Panel (APL) survey (Lusardi & Mitchell, 2009); and U.S. Financial Capability Study (Lusardi & Mitchell, 2011). The prevalent use of the Lusardi and Mitchell financial literacy scale is reflective of its early effectiveness to assess financial literacy and its impact on financial well-being (Lusardi & Mitchell, 2006; Lusardi & Mitchell, 2007; Lusardi & Tufano, 2009).

Other measures have been utilized to assess financial literacy. Most recently, Knoll and Houts (2012) developed a rigorously tested 20-point questionnaire utilizing item response theory (IRT). IRT is a psychometric measure designed to pick-up on unobservable traits. Classical test theory focuses on the aggregate of scores that make up an exam while IRT emphasizes the response of individual items and whether or receiving a correct or incorrect answer measures the construct being tested (Baker & Kim, 2004). Based on their findings, their scale proved to be a more useful measure of financial literacy than the Lusardi and Mitchell three-point scale (Knoll & Houts, 2012). Its effectiveness can be attributed to the comprehensive nature of the questions asked. Questions within the measure range from portfolio diversification to debt management. This also includes the widely-used Lusardi and Mitchell questions.

Financial literacy efforts are hampered by the lack of a clear theoretical framework and consensus on a definition. As a consequence, measuring and comparing the impact of financial literacy on financial well-being across interventions has proven to be a difficult challenge. Nonetheless, calls of action to address low financial literacy rates have continued to increase in urgency (CFPB, 2015a; FLEC, 2012; PACFC, 2013). The Consumer Financial Protection Bureau released a clearly defined and rigorously tested assessment of financial well-being. The development of this scale provides advocates of financial literacy efforts the opportunity to understand what aspects of financial literacy are most effective in promoting financial well-being. Utilizing a consistent assessment of financial well-being may be critical in researchers' efforts to create a unified definition of financial literacy and a consistent process by which research and outreach efforts are operationalized.

Financial Well-Being Literature Review

Some of the earliest efforts to address the optimization of household production assumed that individuals behaved rationally to optimize the utility of a household. Correspondingly, the way in which households improved their utility was merely a function of objective inputs that resulted in optimal or suboptimal outputs Becker (1965). Financial literacy efforts have been utilized as a strategy to improve the financial well-being of households since the earliest understandings of classical economics. As such, financial literacy efforts have been created to follow in this line of classical economic thinking. The more a person knows about the market conditions in which he or she must navigate the greater financial well-being he or she will have. However, recent studies demonstrate that knowledge and understanding of market conditions cannot increase an individual's sense of financial well-being.

In fact, several studies have demonstrated that higher engagement in financially optimal behaviors has a positive impact on one's perceived financial well-being. van Praag, Frijters, and Ferrer-i-Carbonelli (2003) found that households who participated in healthy saving and spending behaviors reported higher levels of financial well-being. Netemeyer, Warmath, Fernandes, and Lynch (2017) confirmed that current money management stress and expected future financial security were reliable predictors of overall subjective well-being. Engaging in suboptimal financial behaviors has been linked to low levels of financial well-being as well. Individuals engaging in suboptimal financial behaviors have negative consequences that extend beyond the individual and affect his or her family and community (Dunn & Mirzaie, 2012; Kim & Garman, 2003). In fact, the stress induced by poor financial management, limited resources, and financial instability has been shown to lead to distress and poor interpersonal relationships (Conger, Rueter, & Conger, 2000).

Defining Financial Well-Being

Financial well-being, as with financial literacy, has multiple definitions that are used throughout the literature. The earliest works on financial well-being utilize several different definitions and constructs that are covered by various disciplines (e.g., Psychology, Marketing, and Economics). Ferguson, Horwood, and Beautrais (1981) correlated financial well-being with one's income level and assets. This notion of financial well-being as being an objective measure is consistent with how finances are measured in the subjective wellness literature (Diener, Lucas, & Oishi, 2018).

Additional research within this area began to expand the complexity in which financial well-being has been viewed. McGregor and Goldsmith (1998) observed financial welfare, used synonymously with financial well-being, as the combination of economic, social, physical,

emotional, environmental, and spiritual factors. van Praag, Frijters, and Ferrer-i-Carbonelli (2003) widened the scope of financial well-being even further by assessing life satisfaction over six areas: business, home, leisure, financial situation, health, and environmental. A more recent conceptualization of financial well-being presented by Bruggen et al. (2017) defines it as "as the perception of being able to sustain current and anticipated desired living standards and financial freedom" (p. 229). The definition is built around a conceptual framework that assesses how interventions, behavior, consequences, contextual factors, socio-demographics, capacity, traits, financial norms, and life events influence overall financial well-being (Bruggen et al., 2017). These differences in definition are reflective of how financial well-being is viewed as either objective, subjective, or both.

From the objective vantage point, a household can improve their overall financial well-being by making optimal decisions. As such, some researchers measure financial well-being as purely an objective measure (Diener, 1984; Joo & Grable, 2004; Kahneman & Deaton, 2010). For instance, in the Joo and Grable (2004) financial behavior scale, financial well-being was measured objectively as one's ability to "set money aside for savings" or whether someone "spent more money" than he or she had. Another common measure of financial well-being, used by Hayhoe, Leach, and Turner (1999), was a scale that assesses financial well-being as an objective measure through the individual's ability to manage personal and household finances.

Some researchers view financial well-being from both an objective and a subjective lens. Financial well-being, in other words, is derived from one's perception of his or her quality of life. Several studies have operationalized the notion of subjective and objective measures. For instance, studies have measured debt and income levels as objective measures and their perceptions of said debt and income as more subjective measures (Porter & Garman, 1992; Shim,

Barber, & Lyons, 2009). Vosloo, Fouche, and Barnard (2014) define financial well-being as the way in which a person assesses his or current financial situation from both an objective and subjective perspective. Williams (1983) incorporated spiritual and financial status in her definition of financial well-being. Her research suggested that financial well-being was reflective of material and non-material aspects of one's life: the objective and subjective

Moreover, several studies have assessed financial well-being as a mostly subjective measure. For example, a financial well-being scale utilized in 1992 measured how satisfied or dissatisfied an individual was with their current level of "material goods" or "net worth" (Wilhelm, Varcoe, & Fridrich, 1993). A number of researchers have sought to glean insight from one's perception of his or her circumstances rather than the financial circumstance itself (Norvilitis, Szablicki, & Wilson, 2003). The notion of subjective beliefs is intriguing to researchers because an objective measure does not always speak to one's comfort or lack thereof with regard to an individual's personal finances. A good example would be student loan debt. Two students with identically high student loan debt balances can perceive their balances differently based on their career prospects. Consequently, some factors may cause two individuals to have very different subjective measures of their well-being despite their circumstances being seemingly identical. Financial well-being takes on many different definitions and constructs in the financial well-being literature; however, Netemeyer, Warmath, Fernandes, and Lynch (2017) argued that despite these efforts there is still much left to be explored.

Financial Well-Being and the Subjective Well-Being Literature

The field of subjective well-being has grown drastically over the past two decades. Research in this area went from 2,500 articles in 2005 to over 17,000 articles as of 2018 (Diener,

Lucas, & Oishi, 2018). Based on a subjective definition of financial well-being, the field of subjective well-being (SWB) literature has emerged as various methodologies from which to explore the concept. SWB seeks to understand the personal nuances in the way people come to experience life which include life satisfaction, happiness, and positive effect (Diener, 1984). Diener's work is part of a much larger movement that seeks to understand what factors promote and sustain contentment as opposed to factors that drive discontentment and low levels of life satisfaction. Desire to understand financial well-being from the scope of SWB, as it relates to financial literacy efforts, is increasingly important given the growing popularity of behavioral finance.

Behavioral finance research has opened the door for researchers to begin the necessary work of understanding socio-economic status, cultural sensitivity, confidence, and awareness as it relates to financial well-being within the context of financial literacy intervention development and delivery. A recent study on the impact of two-year financial literacy intervention in Silicon Valley was developed to be culturally sensitive and long enough to help participants build confidence in the skills they learned (Xu, 2018). The slight changes in the intervention demonstrate how the research is gradually evolving to create and assess holistic models of financial literacy intervention. Another factor which impacts finance behavior is confidence. Henager and Cude (2016) found that subjective financial literacy, or confidence, was a more useful tool in encouraging better money management outcomes among younger populations. Huston (2015) expressed the need to incorporate personal awareness in conjunction with opportunities to habituate optimal financial behaviors as a more effective way of promoting behavioral change. With regard to awareness, Huston (2015, p. 102) goes on to say, "Financial awareness can help people realize the need to enhance their human capital related to personal

finance." As such, subjective measures of confidence, and whether someone sees a need to change his or her behaviors, may impact the effectiveness of financial literacy interventions. Achieving optimal levels of financial well-being is just as much about awareness and one's belief in their ability to achieve a goal as it is financial knowledge.

Subjective measures of financial well-being have been largely missing from the well-being literature. Although SWB focuses on perceived life satisfaction and positive affect, assessments of wealth and income-related domains have in large part been objective (Diener, 1984). Some of the earliest work on SWB found that income was related to happiness. Higher levels of income afford individuals the opportunity to engage in and enjoy a myriad of life experiences that someone with low levels of income could not afford (Diener, Lucas, & Oishi, 2018). However, as noted in Diener's (1984) seminal work on SWB, "People who are wealthier than others tend to be happier, but as the overall level of income rises, happiness does not necessarily rise with it" (p. 533). This finding is consistent with the notion of a happiness threshold (Diener, Lucas, & Oishi, 2018). Early findings concerning the happiness threshold revealed that individuals experienced lower levels of utility for every dollar they earned after $75,000 (Kahneman & Deaton, 2010). The authors go on to argue that although there might be a threshold with regard to money and happiness, having low levels of income can have an adverse effect on one's quality of life. The findings on money and happiness illustrate that research on financial well-being is limited if observed primarily from an objective lens.

Researchers continue to explore the relativity and objectivity of income or wealth on SWB. Income relativity establishes that one's level of well-being is related to her income relative to his or her surroundings. Luttmer (2005) found that affluent individuals living amongst other affluent individuals were less happy than poor individuals living amongst other poor individuals.

This finding is due to the impact that social comparison has on high-income earners. As a result, poor people were less sensitive to their situation because it was a shared experience. Wealthier people, on the other hand, were more sensitive to their lifestyles when compared to others like them. The relationship, however, changes when poor and wealthy people coexist within the same neighborhoods — the comparison focus shifts from within-groups to between-groups. Oishi, Kesebir, and Diener (2011) found that feelings of dishonesty and trust arose from perceptions of income inequality amongst poorer populations when living amongst more affluent neighbors. Income relativity, a latent construct, can alter one's perceptions of well-being regardless of financial circumstances.

Relativity impacts an individual's wellbeing on a subjective level, but on a broader scale, the overall wealth of a nation can impact the individual's wellbeing on an objective level. With regard to income being an objective measure of SWB, Diener, Tay, and Oishi (2013) found that impoverished people in wealthier countries generally demonstrated higher levels of well-being. Although less fortunate, individuals in more prosperous nations have greater access to income, food, health and housing assistance than those in poorer countries. In other words, higher levels of economic security at the individual or national level provide greater access to basic needs, creating higher levels of overall life satisfaction and positive effect. Diener et al. (2013) found support for this more objective stance on income's effect on SWB as have other researchers (Diener, Kahneman, Tov, & Arora, 2010; Stevenson & Wolfers, 2008). In light of these findings, there is still much left to be understood about households across all levels of socio-economic status and the corresponding effect on financial well-being.

CFPB Measurement of Financial Well-Being

The inconsistency regarding the conceptualization of financial well-being served as a call to action by the Consumer Financial Protection Bureau (CFPB) for researchers to better understand, define and operationalize financial well-being from the perspective of the consumer (CFPB, 2015). The CFPB has, since the passing of the 2010 Dodd-Frank Act, been intricately involved in educating consumers and advocating for greater consumer protections. The CFPB, utilizing the U.S. Financial Diaries and Financial Health study conducted by the Center for Financial Services Innovation (CFSI), created a two-prong model that assessed financial well-being based on two factors: current money management stress and expected future financial security (Netemeyer, Warmath, Fernandes, & Lynch (2017). Researchers were able to validate their model and demonstrate that ongoing money management stress and expected future financial security provide useful information in understanding an individual's SWB (Netemeyer, Warmath, Fernandes, & Lynch, 2017).

Given the lack of a universally accepted measurement of financial well-being, the CFPB (2015) undertook to develop a clearly defined and rigorously tested subjective measure of financial well-being that was consumer focused. Although different definitions and measurements of financial well-being have been used over the past few decades, prior measures of financial well-being were not rigorously tested nor developed through an in-depth understanding of the participant's voice as the CFPB (2015) had done in its use of the consumer diaries.

To do this, the CFPB (2015) and its research team analyzed qualitative data from the U.S. Financial Diaries and Financial Study conducted by the CFSI. The qualitative studies brought about a few essential themes: 1) The desire to have a sense of financial freedom, 2) The ability to

pay current bills, 3) The capacity to plan for the future, and 4) The ability to not have to worry about unexpected financial shocks. These themes ultimately shaped the conceptual framework in which the CFPB (2015) financial well-being definition was established (See Figure 2): 1) Control over day-to-day expenses, 2) Capacity to absorb financial shocks, 3) Financial freedom to make choices, and 4) Ability to meet future financial goals.

	Present	Future
Security	Control over your day-to-day, month-to-month finances	Capacity to absorb a financial shock
Freedom of choice	Financial freedom to make choices to enjoy life	On track to meet your financial goals

Figure 2: CFPB's Four Elements of Financial Well-Being

The CFPB (2017) developed the financial well-being scale utilizing the Item Response Theory (IRT). IRT was also used by Knoll and Houts (2012) to assess the measurement's ability to validly and reliably measure financial literacy. The CFPB (2017) utilized IRT because it was more psychometrically rigorous and " [allowed] for each item's relatedness to the concept (e.g. financial well-being) and degree of severity, as well as respondent group (e.g., age) properties, to be accounted for when scoring" (p. 11). This method was considered preferable over other methods because IRT has proven to be a more precise instrument that is used by standardized educational services and the assessment of health outcomes (Hambleton et al., 1991; Knoll & Houts, 2012). The scale underwent three rounds of testing which included over 10,000 survey participants. A team of academic experts selected 47 survey items to be analyzed. By the end of the third round of testing, the CFPB Financial Well-Being scale decreased from 47 to a final size of 10 questions. The marginal reliability for the scale, similar to that of Cronbach's alpha in classical test theory, is 0.80, which is well above the 0.70 thresholds for scale credibility (Embretson & Reise, 2013; Seonghoon, Leonard & Feldt, 2010).

Moreover, the development of the financial well-being scale makes it possible for financial literacy efforts to use a robust and rigorous measurement to assess financial well-being. What's more, the financial well-being construct captures the primary topics covered in most financial literacy interventions such as budgeting (e.g., control over day-to-day expenses), savings and investing (e.g., meet future financial goals), debt management (e.g., control over daily expenses), and risk management (e.g., ability to absorb financial shocks). As with the grounded approach taken by CFPB (2015b), financial literacy practitioners and researchers can utilize the financial well-being scale as an inductive approach to creating consensus around how financial literacy is defined and operationalized. Establishing a unified measure of financial well-being can help advocates of financial literacy more objectively measure the impact and effectiveness of current and future interventions.

Social Capital Literature Review

Financial literacy efforts, at a conceptual level, cover the following: 1) Financial literacy, 2) Ability to communicate about financial concepts, 3) Capacity to manage finances, 4) Ability to make the right financial decisions, and 5) Confidence in one's ability to plan for the future (Remund, 2010). Huston (2010), in her analysis of 72 financial literacy assessments, discovered that 63% of the financial literacy initiatives covered basic financial concepts, 59% covered debt management, and 69% taught savings and investments concepts. Asset protection was only taught in 33% of the financial literacy initiatives, and 25% of the studies included all four topics (Huston, 2010). Understanding that economic mobility and opportunity are key factors to improving financial well-being, the interaction of social capital and human capital (Huston, 2015) as it relates to financial literacy and economic advancement efforts remains absent in the literature.

In his seminal work on social capital, Coleman (1988) defines social capital as the interaction between the agent and a social structure that is built upon the trustworthiness of the social environment, dissemination of information, and accountability (Coleman, 1988). Bourdieu (1986) defines social capital as the collective network of individuals and the norms associated with being a part of a collective. This notion of social capital implies group conformity. As such, social norms are strong determinants of how an individual behaves within the boundaries of those norms. Another definition of social capital presented by Putnam (1993) explicitly states how social capital, with regard to the strength of one's social networks, can improve societal efficiency and promote beneficial outcomes. The strength of one's social capital has the capacity to influence human capital by encouraging or discouraging certain behaviors. (Coleman, 1988). This notion of improving one's ability to make sound financial decisions is consistent with financial literacy outreach efforts; improved capacity correlates with improved financial well-being. Improved financial well-being is the result of the access that strong social networks provide.

Since the preliminary works of Coleman (1988) and Putnam (1933), additional variations to the definition of social capital have emerged. Lin (2001) speaks to the cultural implication of social capital. These cultural factors, given the demographic being assessed, influence the social norms that impart knowledge and the types of knowledge acquisition, values, and attitudes. As noted by Willis (2008), financial literacy efforts are ineffective in their ability to recognize and address the biases that may lead to suboptimal financial decision making (Porto, & Xiao, 2015). Some authors define social capital more narrowly with regard to the shared values of a homogenous community (Kawachi, 2006). Definitions also consider how decisions made at the macro level impact social capital (World Bank, 1998). These definitions of social capital,

although slightly different, bring light to the idea that macro and micro social constructs, quality of relationships, and perceptions of those relationships can impact the development of human capital. Social capital is the means by which individuals, who are a part of a collective, can gain access to other forms of money as a way of optimizing one's level of well-being (Bourdieu, 1986).

Quality social capital helps individuals improve their station in life. A recent survey by LinkedIn (2018) learned that nearly 80% of its respondents achieved new job opportunities or advancement within their career due to their professional networks. Erickson (2017), in a more rigorously tested academic article on the impacts of social capital, found that not only did social capital matter but having a variety of social relationships to optimize one's economic mobility also is most beneficial. This finding supports the positive associations attributed to expanded definitions of social capital such as bonding, bridging and linking capital.

Well-Being and Social Capital

The impact of social capital has far-reaching effects on the life of an individual. Halpern (2005) identified how social structures could have an impact on one's overall health and well-being. Work done by Elgar et al. (2011) demonstrated that strong social networks influence human capital by promoting higher levels of life satisfaction and positive effect. As such, although not explicitly identified in the financial literacy and financial well-being literature, social structures can influence overall financial well-being. As a consequence, financial literacy efforts, designed homogeneously for a heterogeneous audience, may be able to affect financial well-being by identifying and promoting access to social capital as a way of developing human capital. An example would be Huston's (2015) recommendation to utilize the public health model to encourage the use of technology to help financial literacy intervention participants

overcome any cognitive gaps they may have with regard to literacy or numeracy. Creating financial awareness for such resources could help an individual circumvent limitations that may exist in his or her current social network. If done well, it could even have an exponential impact on financial behaviors. Xu and Zia (2012) found that financial literacy efforts produced a spillover effect; individuals who participated in financial literacy interventions were likely to share the benefits they received within their social networks.

Bonding, Bridging, and Linking Capital

There are three factors that impact the foundation upon which social capital is predicated: trust, communication, and accountability. The construct of social capital is predicated on the relationships an agent has with others who exist within his or her environment. The quality and value of these relationships to the agent are built upon a foundation of trust, communication, and accountability (Coleman, 1988). With regard to trust, Coleman (1988) noted that efficient societies are built on trust. In this instance, an individual trusts that his or her contributions (i.e., time, talent, and money) will be reciprocated by others within his or her social network. Violations of this trust negatively impact the effectiveness of a social network to improve the overall well-being of those who operate within it. Secondly, information channels influence social capital. Information channels are the means by which an individual receives his or her information on a subject of particular interest. Per Coleman (1988), “information is important in providing a basis for action” (p. 104). Lastly, a social network cannot optimize its function and efficiency without generally accepted norms in which individuals are held accountable. A norm is characterized as something that is widely accepted, such as the "Golden Rule": Do unto others as you would wish others to do on to you. When all agents of a collective abide by this rule, it creates an environment of trust and reciprocity. In scenarios where this construct is violated, it

creates an imbalance within a society that diminishes cooperation and creates skepticism among everyone involved (Coleman, 1988). The impact of social capital is also affected by the type of relationship in which one chooses to or not to engage.

Based on this construct of social capital, early understandings of social capital were categorized into three primary networks: 1. Informal ties (i.e., family and friends), 2.) Generalized relationships (i.e., community-based relationships), and 3.) Institutional relationships (i.e., financial services, police, and government officials) (Stone & Hughes, 2002). As one navigates the society in which he or she exists, levels of trust, communication, and expectations of accountability vary. The extent to which an individual engages with his or her community depends on the strength of relationships established within the construct in which effective systems are created. Understanding the complexity of these social networks is difficult to measure as demographic variables such as gender, ethnicity, religion, age, and socioeconomic status affect how an individual may interact within the confines of their social networks at a macro or micro level. As stated by Stone and Hughes (2002), "A dimension of social capital in one network may not correspond with a different dimension of social capital in another network, or with outcomes which may or may not be measured on a different scale" (p. 2). This happens to be true for low-income and financially vulnerable populations.

Many researchers argue that social capital is not a homogenous phenomenon, and that depending upon the quality or nature of the relationship, it can be categorized into three categories: bonding, bridging, and linking capital. (Mayoux, 2001; Woolcock & Narayan, 2001). Bonding capital tends to consist of a smaller network with a higher level of trust and emotional interaction with individuals like oneself (Poortinga, 2012). Parents, close siblings, and friends are often categorized as bonding capital. Bridging capital consists of a more extensive network of

individuals in which trust and expectations are weaker than what would be expected from the closeness of individuals characterized as bonding capital (Woolcock & Narayan, 2001). Suitable examples of bridging capital are the loose relationships individuals have with their Facebook friends. Linking capital consists of relationships individuals have with public institutions such as banks and political figures (Field, 2003).

As noted in the earlier archetypes of social capital, bonding, bridging and linking capital vary from individual to individual based on factors such as culture and socio-economic status. For instance, a person considered to be low-income may have high levels of bonding capital that provide unconditional love and emotional support; however, this person may not have access to the linking capital necessary to elevate his or herself from low-income to the middle class. On the other end of the spectrum, a person with strong political and financial ties (linking capital) may be deficient in the area of bonding capital. In either case, the research provides substantial evidence that the quality and strength of one's social capital can influence his or her life trajectory (Erickson, 2001; Kim & Aldrich, 2005; Knack & Keefer, 1997). The impact that the different types of social capital have on an individual plays a vital role in one's ability to obtain and sustain satisfactory levels of financial well-being.

Bonding, Bridging, and Linking Capital's Impact

Research on bonding capital has shown how trusting relationships positively affect general well-being in various life domains. Bonding capital has been found to impact overall well-being positively. Berkman (2000) found that individuals with high levels of bonding capital (i.e., care, love, empathy, and value) are less likely to experience bouts of depression compared with those who have lower levels of bonding capital. Generally speaking; however, family and close friendships promote higher levels of well-being when compared to individuals who do not

have strong informal networks (Collins, Neal, & Neal, 2014; Putnam, 2001). Bonding capital is not the only social capital construct that has an impact on well-being. Bridging capital plays a pivotal role as well.

Bridging capital, which represents the weaker ties and lower levels of trust one has with an extended network, is beneficial in the development of social capital as well. A person's interactions with their bonding capital have a significant impact on the level of trust he or she develops within his or her bridging social network (Kawachi & Berkman, 2003). Community outreach programs, serving as a conduit between bridging capital and linking capital, have proven to be a useful tool for improving economic outcomes for individuals and communities (Engbers, Rubin, & Aubuchon, 2017). Research has shown that community members who routinely participate in these outreach initiatives are less likely to experience high rates of mortality and depression relative to those who do not participate (Brown, Nesse, & Vinokur, 2003; Lum & Lightfoot, 2005; Luoh & Herzog, 2002). As cautioned by Hanka and Engbers (2017), it is challenging to replicate programming effectiveness from one community outreach intervention to another due to the heterogeneity of each community's population, resources, and established norms. The same issue is evident concerning the lack of homogeneity of financial literacy interventions. Each intervention addresses needs specific to its community, which ultimately must be established upon Coleman's (1988) constructs of trust, reciprocity, communication, and accountability to positively affect change within a community (Leonard & Onyx, 2004). Only when programs are tailored to the specifics of the community in which they are embedded can the bridging social capital create the desired impact. The same can be said about linking capital.

Linking capital has been proven to be an effective way of improving an individual's well-

being due to its ability to promote economic growth within a household. As noted by Diener et al. (2018), income is positively associated with measures of subjective well-being up to a certain threshold. Although there is some research that would suggest that the impact of linking capital is weak (Marsden & Gorman, 2001; Mouw, 2003), the research indicates that individuals who have strong relationships with entities or individuals with influence, wealth or political power have better opportunities for upward mobility than those who do not (Leonard & Onyx, 2004).

Summary

Financial literacy is an issue of national concern. Researchers have consistently demonstrated that low levels of literacy have adverse effects on one's ability to manage their financial resources. To address this issue, many financial literacy initiatives have been created based upon the intuition that greater financial literacy improves financial behaviors (; Fort, Manaresi, & Trucchi, 2016; Grohmann, Kouwenberg, & Menkhoff, 2015); however, several studies suggest that financial literacy alone is not enough (Gale & Levine, 2011; Willis, Porto & Xiao, 2015; Wolf, 2018) to improve financial well-being – especially for the most financially vulnerable populations (Lyons et al., 2006).

Due to an emphasis on objective measures, much of the financial literature focuses on financial literacy and its impact on financial well-being; however, research is expanding to include subjective measures (i.e., confidence, trust, and attitudes) in their assessments. Although there is not a universal consensus amongst researchers regarding a clear theoretical framework and definition for financial literacy, researchers are gradually evolving to see the issue from new vantage points. The CFPB's development of a well-defined and rigorously tested financial well-being scale allows for those involved with financial literacy efforts to now consistently measure financial well-being.

The literature in social capital is robust in its analysis of cultivating leadership or workplace trajectory; however, there is very little research that measures the impact of perceived levels of social capital on financial well-being. Fernandes et al. (2014) found that the impact of financial literacy on participants gradually diminished over time and was found to have no effect on participants after 24 months. This would suggest that financial literacy initiatives are not taking into account how social capital (i.e., one's bonding, bridging, and linking networks) plays an instrumental role in the development of human capital.

In closing, efforts aimed at addressing financial well-being are lacking in their understanding of social capital's effect on financial well-being. Research has shown how low levels of financial literacy are often associated with women, minorities, the least educated, and the low-income (Atkinson & Messy, 2013; de Bassa & Scheresberg, 2013). Low levels of financial literacy are associated with populations that are often cited as being the most financially vulnerable and susceptible to financial shocks within the economy. Although financial literacy interventions have been proven to improve the knowledge of low-income households (Lyons, Chang, & Scherpf, 2006; Martin, 2007), there is more that can be known about how factors such as bonding, bridging, and linking capital have on the financial well-being of households. Given that the development of most financial literacy efforts are aimed at helping all households achieve higher levels of financial well-being, the following research seeks to build upon the pre-existing literature by evaluating the impact of financial knowledge, financial skill, financial attitudes, and social capital on financial well-being across federal poverty level status.

CHAPTER 3

METHODOLOGY

Methodological Approach to Data Analysis

The data used for empirical analysis came from the 2016 Consumer Financial Protection Bureau (CFPB) Financial Well-Being data set. The financial well-being scale was developed as a call to action by the CFPB (2015) to understand subjective measures of financial well-being. Conceptually, financial well-being is defined as one's ability to manage their day-to-day finances, plan for future shocks, live for the present, and plan for the future (CFPB, 2015). The financial well-being scale utilized over 200 multidimensional measures to assess the financial situation of a household. Those measures include but are not limited to assessments of financial literacy (i.e., Knoll & Houts, 2012; Lusardi & Mitchell, 2006), numeracy ability, materialism, and the ability to absorb financial shocks as well as subjective measures (i.e., confidence, self-efficacy, subjective well-being, etc.) and demographic variables (i.e. race, dependents, marital status, etc.). Survey data were conducted online or by telephone and were split between two samples: younger consumers (18-61 years) and older consumers (62 years and older). In total, the CFPB collected 14,000 surveys of which only 6,394 surveys were used for the final data set.

The populations of interest in the study were split into four groups. Group 1 consisted of the entire sample population, which initially was of 6,394 survey respondents. The population was reduced to 6,306 and 6,294 survey respondents in the first and second regression models of the data due to missing survey responses. Group 2, a subsample of the full sample, consisted of households whose federal poverty level status was greater than 199% of the federal poverty

level. There were 4,874 survey respondents in the complete sample. The population was reduced to 4,820 and 4,816 survey respondents for the first and second regression models due to missing survey responses. Group 3, a subsample of the full sample, consisted of households whose poverty level status was between 100 and 199% of the federal poverty level. There were 859 survey respondents in the complete sample. The sample was reduced to 842 and 839 survey respondents in the first and second regression models of the data due to missing survey responses. Group 4 consisted of households whose poverty level status was less than 100% of the federal poverty level. There were 661 survey respondents in the complete sample. The sample was reduced to 644 and 639 survey respondents in the first and the second regression models of the data analysis due to missing survey responses.

The reduction in sample population due to missing data was explored on a case by case basis. Bennett (2001) posits that statistical analysis is not likely to be biased with fewer than 10% of the data are missing. Schafer (1999) argues that a missing data rate of 5% of less is inconsequential in its impact on a data analysis. The results from Table 1 below demonstrate that the number of missing values for each individual variable, as well as collectively, is well below the most conservative of missing variable estimation approaches. As such, no additional missing variable analyses need to be performed before conducting the data analysis.

Table 1. Missing Variable Analysis

Variable	Missing	Sample Population	% Missing
Financial Well-being	5	6,394	0.08%
Financial Knowledge	0	6,394	0.00%
Financial Skill	8	6,394	0.13%
Financial Attitudes	0	6,394	0.00%
Social Capital	0	6,394	0.00%
Age	0	6,394	0.00%
Race	0	6,394	0.00%
Gender	0	6,394	0.00%
Education	59	6,394	0.92%
Income	0	6,394	0.00%
EndsMeet	44	6,394	0.69%
Total	116	6,394	1.81%

Federal poverty levels were established in the financial well-being data set by utilizing the federal poverty levels stipulated by the Department of Health and Human Services. Researchers took into account a household's size and income level relative to the established poverty line and used that information to establish the poverty levels within the data set. Furthermore, to ensure adequate representation of households that fell below 200% of the federal poverty level, researchers oversampled this population by 395 households (CFPB, 2017).

The data analysis for the study explored the impact of social capital, financial knowledge, financial skill, and financial attitudes on financial well-being across federal poverty level status utilizing ordinary least square regression (OLS). OLS is a statistical methodology that minimizes the sum of the squares that are reflective of the dependent and independent variables of a model. This type of statistical model serves to provide the best linear predictor—with a small error of prediction—between the dependent and independent variables (Mendenhall & Sincich, 2003).

Research Question 1:

The primary objective of the first analysis was to understand the impact of bonding, bridging, and liking capital on financial knowledge as noted in Figure 3:

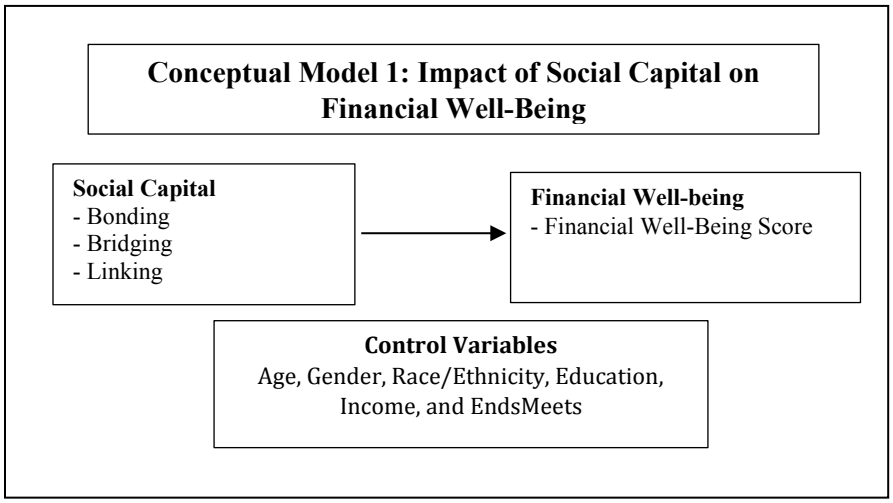

Figure 3: Conceptual Model 1: Impact of Social Capital on Financial Well-Being

The statistical analysis will be run utilizing the following regression model for the general population as well as each of the federal poverty level statuses: $Y_i = \beta_o + \beta_1 x_{i1} + \beta_2 x_{i2} + \beta_3 x_{i3} \ldots + \beta_n x_{in} + \varepsilon_i$

Where, Y_i = Financial Well-being

x_{i1} = Bonding Capital

x_{i2} = Bridging Capital

x_{i3} = Linking Capital

x_{i4} =Age (Control)

x_{i5} =Gender (Control)

x_{i6}=Race (Control)

x_{i7} =Education (Control)

x_{i8} =Income (Control)

x_{i9} =EndsMeets (Control)

For purposes of the data analysis, findings from Model 1 will represent the general population. Findings from Model 2 will represent households that are above 200% of the federal poverty level. Model 3 will represent households that are between 100 and 199% of the federal poverty level. The findings from Model 4 will represent households that are below 100% of the federal poverty level.

Dependent Variable

The dependent variable, *Financial Well-Being*, is a variable established by the CFPB (2015) to assess subjective measures of financial well-being. Financial well-being was measured utilizing the standard version of the financial well-being questionnaire. The standard version of the questionnaire has ten response items. The abbreviated version of the questionnaire has five

response items. Financial well-being was measured by asking respondents how the following response items described their financial situation: "I could handle a major unexpected expense" and "Because of my money situation, I feel like I will never have the things I want in life." Respondents were asked to answer on a scale from 0 to 4 (0 = Not at all, 1 = Very little, 2 = Somewhat, 3 = Very well, 4 = Completely). Respondents were asked additional questions on how the following statements applied to their financial situation: "Giving a gift for a wedding, birthday or other occasions would put a strain on my finances for the month" and "My finances control my life." Respondents were asked to answer on a scale from 0 to 4 (0 = Never, 1 = Rarely, 2 =Sometimes, 3 = Often, 4 = Always). See Appendix A for a complete list of the financial well-being survey questions.

To establish the scale, scale developers conducted cognitive interviews, ran factor analyses and measured reliability by running the questions through three rounds of psychometric testing (CFPB, 2015). Survey respondents received a financial well-being score ranging from 0 to 100 (0 = Lowest Score, 100 = Highest Score). Utilizing the financial well-being data set, Netemeyer, Warmath, Fernandes, and Lynch (2017) found that financial well-being is as much as a predictor of subjective well-being as other frequently-used life domains in the subjective wellness literature. This validates the financial well-being scale's ability to assess subjective measures of financial well-being, which is why IRT was utilized to create the assessment.

Independent Variables

The social capital variables in the model were generated utilizing the *Interconnections* variable within the data set. The interconnections variable was measured by asking respondents, "Do you seek advice on matters involving money from any of the following types of people or organizations?" The list of interconnections included the following: Parent, spouse/partner,

extended family, employer, friends/co-workers, community or faith-based organizations, financial institution, professional advisor/planner, and government. Bonding, bridging, and linking social capital variables were created from the interconnections variable.

Extant literature suggests that *Bonding* capital is related to the connections a person has with his or her parent(s), spouse / partner, and extended family. *Bridging* capital is best categorized by the relationships one has with his or her friends/co-workers, and community-based organizations. And *Linking* capital is related to the extent one has relationships or access to financial counselors, planners, and government agencies. The factor analysis in Tables 2 and 3 below shows that these groupings do not provide the best representation of the constructs found in the literature.

Table 2. Principal Component Analysis for All Interconnection Variables

Variable	Factor Analysis		
	1	2	3
Parent	0.670	-0.269	-0.048
Spouse / Partner	0.258	0.408	-0.588
Extended Family	0.588	0.054	0.034
Employer	0.381	0.139	0.405
Friends / Co-Workers	0.698	0.082	0.028
Community or Faith Based Organizations	0.297	0.147	0.229
Finanical Institution	0.109	0.670	0.209
Professional advisor, planner or counselor/coach	-0.087	0.728	-0.032
Government	0.077	0.162	0.706
Variance Explanation: 45%			

Table 3. Reduced Principal Component Analysis of Interconnection Variables

Variable	Factor Analysis	
	1	2
Parent	0.686	-0.248
Extended Family	0.647	0.123
Friends / Co-Workers	0.730	0.136
Finanical Institution	0.147	0.734
Professional advisor, planner or counselor/coach	-0.083	0.772
Government		
Variance Explanation: 54%		

The factor loadings in the first factor analysis table show that the parent and friends/co-workers interconnections variables are similar in nature. The second factor analysis shows that financial institutions and professional advisors / counselors group together. Spouse/Partner, community-based organization and the government did not group with the other interconnection variables. However, the variance explanation of the model was less than 50%

A second principal component analysis was run. This model was reduced by the three interconnection variables that did not group with the other variables. The overall variance of explanation was above 50%. In this analysis, the original groupings were much stronger. As such, for the purposes of the data analysis, a proxy for *Bonding* capital was created utilizing the spouse/partner interconnections variable. This is consistent with the literature on bonding capital. *Bridging* capital was created utilizing the parent, extended family, friends, and employer interconnections variables. *Linking* capital was created utilizing the financial counselor and financial planner interconnections variables. Community-based organizations and government agencies were dropped from the construct as they did not group well with the other interconnection variables.

Control Variables

Several control variables were included in the model. The control variables are age, gender, race, education, income (Babiarz & Robb, 2012; Henager & Cude, 2016; Netemeyer, Warmath, Fernandes, & Lynch, 2017) as well as a households the ability to make ends meet. Age was measured using the *Age* variable. The age variable was recoded into three groups: age ranges were recoded as follows: Age 1 = 18 - 34, Age 2 = 35 - 61, Age 3 = 62 +. Age 2 will be used as the reference group for the statistical analysis. Gender was measured using the *Gender* variable. Gender was recoded in the data set where Female = 1 and Male = 0. Male will be set as the

reference point for the data analysis. Race was measured using the *Race* variable. Race was coded in the data set as follows: White, Non-Hispanic = 1, Black, Non-Hispanic = 2, Other, Non-Hispanic = 3, and Hispanic = 4. White will be used as the reference point in the data analysis.

Moreover, Education was measured using the *Head of Household Education*. Educational levels were dichotomously coded where a Bachelor's Degree or Higher = 1 and All Else = 0. Educational attainment below that of a bachelor's degree will be used as the reference point in the analysis. Income was measured using the *Household Income* variable. The income variable was split into five groups where Income 1 = $29,999 or less, Income 2 = $30,000 to $49,999, Income 3 = $50,000 to $74,999, Income 4 = $75,000 to $149,999, and Income 5 = $150,000 or more. Income 3 will be used as the reference point in the data analysis. A household's ability to make ends meet was measured using the *EndsMeets* variable. Survey respondents were asked to rate the "Difficulty of covering monthly expenses." Respondents had three answer choices: Not at all Difficult; Somewhat Difficult; Very Difficult. These responses are coded as EndsMeets1, EndsMeets2, and EndsMeets 3 in the data analysis where EndsMeets 2 will be used as the reference point.

Research Question 2:

The primary objective of the second analysis was to understand the impact of bonding, bridging, and linking capital in conjunction with the covariates of financial knowledge, skill, and attitudes on financial well-being as noted in Figure 4 below. In Model 1, the direct effects of social capital on financial well-being were measured. The follow-up analysis assesses whether or not the various types of social capital, along with frequently used covariates in the literature, has a significant effect on financial well-being.

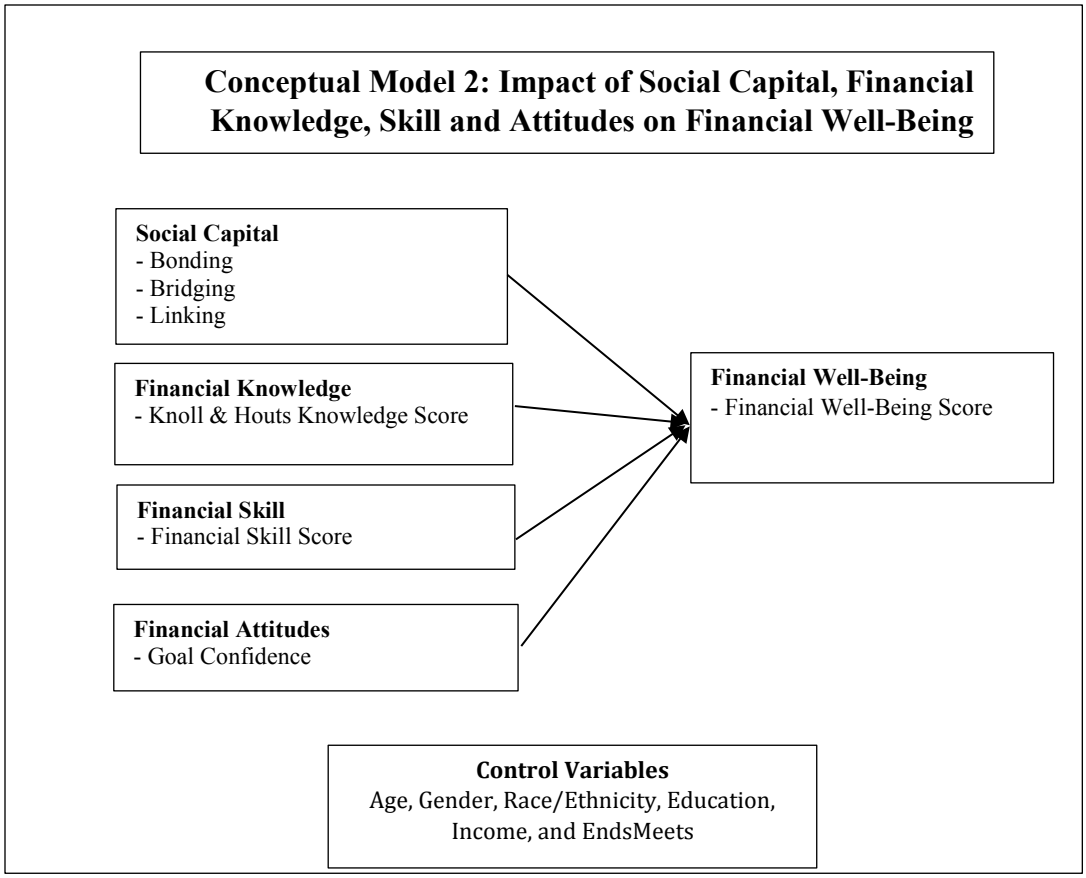

Figure 4: Conceptual Model 2 - Impact of Social Capital, Financial Knowledge, Skill, and Attitudes on Financial Well-Being

The statistical analysis will be run utilizing the following regression model for the general population as well as each of the federal poverty level statuses: $Y_i = \beta_o + \beta_1 x_{i1} + \beta_2 x_{i2} + \beta_3 x_{i3} \ldots + \beta_n x_{in} + \varepsilon_i$

Where, Y_i = Financial Well-being

x_{i1} = Bonding Capital

x_{i2} = Bridging Capital

x_{i3} = Linking Capital

x_{i4} = Financial Knowledge

x_{i5} = Financial Skill

x_{i6} = Financial Attitudes

x_{i7} = Age (Control)

x_{i8} =Gender (Control)

x_{i9}=Race (Control)

x_{i10} =Education (Control)

x_{i11} =Income (Control)

x_{i12} =EndsMeets (Control)

As with the first regression analysis, findings from Model 1 will represent the general population. Findings from Model 2 will represent households that are above 200% of the federal poverty level. Model 3 will represent households that are between 100 and 199% of the federal poverty level. The findings from Model 4 will represent households that are below 100% of the federal poverty level.

Covariates

In the second OLS regression analysis, three additional independent variables were included in the model to proxy for financial knowledge, financial skill, and financial attitudes. An abbreviated form of the Knoll and Houts financial literacy scale was used to capture the *Financial Knowledge* variable. There are twenty items on the standard Knoll and Houts (2012) scale. An abbreviated version consisting of ten knowledge-based questions was used for the CFPB data collection process. Questions from the 10 item scale measure various aspects of financial knowledge ranging from one's understanding of diversification (i.e., "When an investor spreads his money among different assets, does the risk of money :"), debt management (i.e., "Suppose you owe $3,000 on your credit card. You pay a minimum payment of $30 each month. At an Annual Percentage Rate of 12% (or 1% per month), how many years would it take to

eliminate your credit card debt if you made no additional new charges?)", and housing (i.e., "Is the following statement true or false? Housing prices in the US can never go down.") Scores ranged from -2.05 to 1.27. -2.05 being the lowest score and 1.27 being the highest score.

The financial skill construct was assessed using the *Financial Skill* variable. *Financial Skill* was measured utilizing the standard version of the financial skill questionnaire. The standard version of the questionnaire has ten response items. The abbreviated version of the questionnaire has five response items. The *Financial Skill* measure assessed financial skill based on how respondents answered the following prompts: "I know how to make complex financial decisions" and "I know where to find the advice I need to make decisions involving money." Respondents were asked to answer on a scale from 0 to 4 (0 = Does not describe me at all, 1 = Describes me very little, 2 = Describes me somewhat, 3 = Describes me very well, 4 = Describes me completely). Respondents were asked additional questions on how the following statements applied to their financial situation: "I know where to find the advice I need to make decisions involving money" and "I struggle to understand financial information." Respondents were asked to answer on a scale from 0 to 4 (0 = Never, 1 = Rarely, 2 =Sometimes, 3 = Often, 4 = Always). For a complete list of the financial well-being survey questions, see Appendix B.

Financial confidence was captured in the model utilizing variables that measure goal confidence. The *Goal Confidence* variable is a one-item measure that asked respondents to rate their "Confidence in their own ability to achieve financial goals." Respondents were asked to answer the question on a scale from 1 to 4 (1 = Not at All confident, 2 = Not very Confident, 3 = Somewhat Confident, 4 = Very Confident).

CHAPTER 4

DATA ANALYSIS AND RESULTS

Descriptive Statistics for Research Question 1

The descriptive analysis shown in Table 4 shows the co-variates and demographic characteristics for research question one of the dissertation, which is to understand how the use of social capital impacts financial well-being. The descriptive table contains the full sample (Model 1) and, the subsamples, households with incomes greater than 199% of the federal poverty level (Model 2), households with incomes between 100 and 199% of the federal poverty level (Model 3), and households with incomes below 100% of the federal poverty level (Model 4).

The full sample has slightly fewer women (48%) than men (52%) represented in the sample population. Model 2 of the subsample was similar in that 54% of the sample population were men, and 46% were women. Model 3 and Model 4 of the subsample had more women than men: 51% of women in Model 3 and 59% in Model 4. Concerning race, White households made up 70%, 76%, 58% and 42% of the population in full sample and subsamples, respectively. As household incomes drifted closer the federal poverty threshold, White representation decreased as well.

The relationship was reversed for minorities. Black households made up 11% of the full sample. In the subsamples, the representation of Black households decreased in Model 2 to 9% and increased to 13% in Model 3, and 22% in Model 4. Hispanic households made up 14% of the households in the full sample. The representation of Hispanic households decreased slightly in Model 2 to 9% and increased to 25% of the population in Model 3 and 31% of the population in

Model 4. Although the trend is similar for Black and Hispanic households, the representation of Black households most noticeably increased from Model 3 to Model 4 by 10% while Hispanic household representation increased by 17% from Model 2 to Model 3 of the subsamples. The race variable for other remained relatively constant across each of the models. This race category made up 5% of the population in Models 1 and 2, and 4%, and 5% of the population in Models 3 and 4.

The values for the variables such as *Age* and *EndsMeets* were relatively close in mean value with regard to their representation across each of the models. The mean age for Models 1, 2, 3 and 4 were 4.46, 4.63, 4.30 and 3.38. Ages ranged between 45 to 54 years on average except for Model 4 where the average age ranged from 35 to 44. The mean estimation for a household's ability to make ends meet ranged from 1.46 to 1.34 for Models 1 and 2. Models 3 and 4 mean values were only slightly higher with an average perception of ones' ability to make ends meet being 1.74 and 1.99, respectively.

Educational attainment, another frequently used descriptive statistic, was also included in the statistical model. The CFPB data set captured the highest level of education for each household. The highest education level for Models 1 and 2, on average, had mean values of 3.54 and 3.79. This means that the highest level of education for these households, on average, is having attended some college or completing an associate's degree. Respondents in Model 3 and Model 4 reported mean educational levels of 2.84 and 2.54. Respondents from these models, on average, completed high school or received their GED.

The covariates *Bonding*, *Bridging,* and *Linking* capital varied across models. *Bonding Capital*, which represented whether not the respondent asked their spouse/partner for financial advice, differed across the models. Forty-five percent of households in Model 1 had asked their

spouse/partner for financial advice. Models 1 and 2 varied only slightly noting that 48% of respondents in Model 2 asked their spouse or partner for financial advice. Thirty-eight percent of households in Model 3 and 29% of households in Model 4 asked their spouse/partner for financial advice. *Bridging Capital*, which represented whether or not respondents would ask a parent, relative, and friend/co-worker for financial advice held relatively constant across the models. Forty-one percent of households in Model 1 asked their bridging capital for financial advice, 40% in Model 2, 43% in Model 3, and 44% in Model 4. *Linking Capital*, which represented whether or not respondents asked a financial institution or financial planner/coach for financial advice, had greater variability across models when compared with bonding and bridging capital. Thirty-eight percent of households utilized linking capital in Model 1. Forty-four percent of households utilized linking capital in Model 2 compared with 20% of households in Model 3. Households in Model 4 had the lowest usage rate of linking capital, 14%, than the other models.

The mean financial well-being scores for Models 1 and 2 were 56.11 and 58.74. From there, financial well-being scores decrease as FPL decreased. Households in Model 3 and Model 4 reported mean financial well-being scores of 49.24 and 45.39, respectively. There is roughly a 10-point difference in financial well-being between Model 1 (full model) and Model 4 (< 100% of FPL).

Table 4. Descriptive Statistics for OLS Regression 1

	Model 1: Full Population		Model 2: > 199% of FPL		Model 3: 100% - 199% of		Model 4: < 100% of FPL	
	(*N* = 6,306)		(*N* = 4,820)		(*N* = 842)		(*N* = 644)	
Variables	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender								
Female	3,001	47.59	2,192	45.48	428	50.83	381	59.16
Male	3,305	52.41	2,628	54.52	414	49.17	263	40.84
Race								
Black	674	10.69	422	8.76	109	12.95	143	22.20
Hispanic	860	13.64	453	9.49	209	24.82	198	30.75
Other	331	5.25	261	5.41	36	4.28	34	5.28
White	4,441	70.42	3,684	76.43	488	57.95	269	41.77
Bonding Capital								
Yes	2,827	44.83	2,317	48.07	320	38.00	190	29.50
No	3,479	55.17	2,503	51.93	522	62.00	454	70.50
Bridging Capital								
Yes	2,599	41.21	1,952	40.50	363	43.11	284	44.10
No	3,707	58.79	2,868	59.50	479	56.89	360	55.90
Linking Capital								
Yes	2,396	38.00	2,134	44.27	173	20.55	89	13.82
No	3,910	62.00	2,686	55.73	669	79.45	555	86.18

	Mean (SD)	**(Min, Max)**	**Mean (SD)**	**(Min, Max)**	**Mean (SD)**	**(Min, Max)**	**Mean (SD)**	**(Min, Max)**
Age	4.46 (2.11) = 45 to 54	(1, 8)	4.63 (1.95) = 45 to 54	(1, 8)	4.30 (2.21) = 45 to 54	(1, 8)	3.38 (1.93) = 35 to 44	(1, 8)
Education	3.54 (1.14) = Some College	(1, 5)	3.79 (1.05) = Some College	(1, 5)	2.84 (1.02) = HS Degree	(1, 5)	2.54 (1.02) = HS Degree	(1, 5)
Endsmeet	1.46 (0.63)	(1, 3)	1.34 (0.55)	(1, 3)	1.74 (0.68)	(1, 3)	1.99 (0.71)	(1, 3)
Financial Well-Being Score	56.11(14.05)	(14, 95)	58.74(13.27)	(14, 95)	49.24(12.74)	(14, 95)	45.39(13.03)	(14, 95)

OLS Regression Results for Research Question 1

The OLS results in Table 5, represent the findings from research question one. The purpose of this statistical analysis was to understand the impact of social capital on financial well-being. Results within the analysis were grouped into four categories: full sample (Model 1), federal poverty level 200% + (Model 2), federal poverty level between 100% and 199% (Model 3), and federal poverty level below 100% (Model 1). In the paragraphs to follow, an overview of the key findings for each model will be provided.

OLS Regression Results for Model 1

Model 1, representing the full sample population, had 6,306 observations. The r-squared and adjusted r squared values for the regression analysis were .51 and .51, respectively. As such, the findings for the statistical model ran explained 51% of the model variance as it relates to the association between social capital (independent variable) and its impact on financial well-being (dependent variable).

Moreover, *Bonding* and *Linking* capital were highly significant and positively associated with financial well-being. Households sought financial advice from these social capital networks had financial well-being scores that were 0.78 and 1.62 points higher than households that did not. Bridging capital, although highly significant, was negatively associated with financial well-being. Households that sought out financial advice from their bridging capital had financial well-being scores that were 0.97 points less than those who did not.

Of the control variables included in the model, *Age, Race, Education, Income, and EndsMeets* were significant and associated with financial well-being. Age was split into three groups where *Age 2* was used as the reference point in the model. The OLS analysis showed that respondents in the *Age 3* grouping had financial well-being scores that were 5.36 points higher than respondents in the *Age 2* grouping. Race, similar to that of the age variable, was split into 4

groupings, where *Race: White*, served as the reference point. Hispanic households were showed to have financial well-being scores that were 1.22 points higher than their white counterparts.

As it relates to education, respondents that completed a 4-year college degree or more had a financial well-being score that was 0.90 points higher than those that did not. Concerning income, households in the *Income 1* and *Income 2* groupings had financial well-being scores that were 3.34 and 2.07 points less than the reference group — *Income 3*. Households in the *Income 5* grouping had financial well-being scores that were 3.38 points higher than the reference group.

The ends meet variable was grouped into three categories where *EndsMeets2* served as the reference group. Households in the *EndsMeets1* category had financial well-being scores that were 13.30 points higher than the reference group. Households in the EndsMeets3 category had had financial well-being scores that were 9.25 points less than the reference group.

Regression Results and Analysis for Model 2

Model 2, representing households above 200% of the federal poverty level, had 4,820 observations. The r-squared and adjusted r squared values for the regression analysis were .49 and .48, respectively. Findings for the statistical model ran explained 49% of the model variance as it relates to the association between social capital (independent variable) and its impact on financial well-being (dependent variable).

Moreover, *Bonding* and *Linking* capital were highly significant and positively associated with financial well-being. Households sought financial advice from these social capital networks had financial well-being scores that were 0.66 and 1.71 points higher than households that did not. Bridging capital, although highly significant, was negatively associated with financial well-being. Households that sought out financial advice from their bridging capital had financial well-being scores that were 1.34 points less than those who did not.

Age, Income, and *EndsMeets,* control variables were significant and associated with financial well-being. Unlike Model 1, *Race* and *Education* did not produce a significant result. The regression analysis showed that respondents in the *Age 3* grouping had financial well-being scores that were 5.80 points higher than the reference group. As it relates to income, households in the *Income 2* grouping had financial well-being scores that were 1.88 points less than the reference group — *Income 3*. Households in the *Income 4* and *Income 5* groupings had financial well-being scores that were .089 and 3.44 points higher than the reference group.

Concerning the ends meet variable, households in the *EndsMeets1* category had financial well-being scores that were 14.40 points higher than the reference group. Households in the EndsMeets3 category had financial well-being scores that were 9.25 points less than the reference group. The findings in Model 1 and Model 2 are consistent with regards to the impact that EndsMeets has on the regression output.

Regression Results and Analysis for Model 3

Model 3, representing households between 100 and 199% of the federal poverty level, had 842 observations. The r-squared and adjusted r squared values for the regression analysis were .43 and .42, respectively. The findings for the statistical model ran explained 43% of the model variance as it relates to the association between social capital (independent variable) and its impact on financial well-being (dependent variable).

Moreover, *Bonding, Bridging,* and *Linking* capital were not found to be associated with financial well-being. These findings are a departure from the effects that social capital had on financial well-being in Models 1 and 2. As such, social capital does not have an impact on households between 100 and 199% of the federal poverty level.

Age, Income, and EndsMeets were significant and associated with financial well-being. The analysis showed that respondents in the *Age 1* grouping had financial well-being scores that

were 2.44 points lower than respondents in the *Age 2* grouping. This is the first and last instance where being younger produces a statistically significant result in this regression analysis. Respondents in the *Age 3* grouping had financial well-being scores that were 3.90 points higher than the reference group.

Households in the *Income 1*, *Income 2, and Income 4* groupings had financial well-being scores that were 6.00, 4.51, and 9.57 points less than the reference group — *Income 3*. The *Income 5* grouping did not have any statistical output. This is due to the fact that respondents in Model 3 did not have incomes above $150,000. Households in the *EndsMeets1* category had financial well-being scores that were 12.27 points higher than the reference group. Households in the *EndsMeets3* category had financial well-being scores that were 8.22 points less than the reference group.

Regression Results and Analysis from Model 4

Model 4, representing households below 110% of the federal poverty level, had 644 observations. The r-squared and adjusted r squared values for the regression analysis were .35 and .34, respectively. The findings for the statistical model ran explained 35% of the model variance as it relates to the association between social capital (independent variable) and its impact on financial well-being (dependent variable).

Bonding, Bridging, and *Linking* capital, as with Model 3, were not found to be associated with financial well-being. The use of social capital, for households below 200% of the federal poverty level does not have an impact on households between 100 and 199% of the federal poverty level. The opposite is true for households above 200% of the federal poverty level.

Age, Race, Education, and EndsMeets were significant and associated with financial well-being. The analysis showed that respondents in the *Age 3* grouping had financial well-being scores that were 4.35 points higher than respondents in the reference group. With regards to race,

Hispanic households had financial well-being scores that were 3.76 points higher than their White counterparts. The only other instance where race is significant is in Model 1. Hispanic households, as in this model, produced a significant and positive association with financial well-being.

Moreover, households where at least a bachelor's degree has been achieved have financial well-being scores that are 3.56 points higher than those that do not. The only other instance within this analysis where *Education* is significant is in Model. With regards to a household's ability to make ends meet, respondents in the *EndsMeets1* category had financial well-being scores that were 8.54 points higher than the reference group. Households in the *EndsMeets3* category had financial well-being scores that were 10.38 points less than the reference group.

Table 5. OLS Regression 1: The Impact of Social Capital on Financial Well-Being

	Model 1: Full Sample		Model 2: >199% of FPL		Model 3: 100% - 199% of FPL		Model 4: < 100% of FPL	
Variables	**Coefficients**	**Standard Error**	**Coefficients**	**Standard Error**	**Coefficients**	**Standard Error**	**Coefficients**	**Standard Error**
Social Capital								
Bonding	0.78 **	0.29	0.66 *	0.32	1.05	0.76	0.37	1.10
Bridging	-0.97 ***	0.29	-1.34 ***	0.33	0.71	0.74	-0.87	0.89
Linking	1.62 ***	0.30	1.71 ***	0.34	0.97	0.79	0.24	1.40
Controls								
Age 1	-0.61	0.37	-0.21	0.43	-2.44 **	0.92	-0.18	1.02
Age 3	5.36 ***	0.33	5.80 ***	0.36	3.90 ***	0.89	4.35 **	1.32
Gender	-0.26	0.28	-0.36	0.31	0.61	0.73	-0.17	0.93
Race: Black	0.88	0.46	0.89	0.58	1.50	1.04	0.27	1.17
Race: Other	-1.14	0.63	-0.91	0.71	-0.64	1.90	-2.49	1.66
Race: Hispanic	1.22 **	0.45	-0.46	0.58	2.33	0.90	3.76 ***	1.12
Education	0.90 **	0.32	0.53	0.35	1.79	0.93	3.56 *	1.41
Income 1	-3.34 ***	0.48	-1.00	1.43	-6.00 ***	1.58	-	-
Income 2	-2.07 ***	0.47	-1.88 ***	0.53	-4.51 **	1.55	-1.10	2.40
Income 4	0.74	0.4	0.89 *	0.40	-9.57 ***	1.86	-	-
Income 5	3.38 ***	0.51	3.44 ***	0.52	-	-	-	-
EndsMeets1	13.30 ***	0.31	14.14 ***	0.34	12.27 ***	0.76	8.54 ***	1.13
EndsMeets 3	-9.25 ***	0.61	-9.97 ***	0.90	-8.22 ***	1.18	-10.38 ***	1.13
Constant								
Constant	45.87	0.46	45.61	0.49	47.90		43.81	1.23
Observations	6,306		4,820		842		644	
R-squared	0.51		0.49		0.43		0.35	
Adjusted R squared	0.51		0.48		0.42		0.34	

*p<0.05. **p<0.01. ***p<0.001.

Descriptive Statistics for Research Question 2

The descriptive analysis in Table 6 shows the co-variates and demographic characteristics for research question two of the dissertation, which is to understand how the use of social capital impacts financial well-being along with other commonly used covariates such as financial knowledge, skill, and attitudes. The descriptive table contains the full sample (Model 1) and the subsamples: households with incomes greater than 199% of the federal poverty level (Model 2), households with incomes between 100 and 199% of the federal poverty level (Model 3), and households with incomes below 100% of the federal poverty level (Model 4). *Gender, Race, Bonding, Bridging, Linking Capital, Age, and EndsMeeets* shared similar characteristics with the descriptive statistics for the first OLS regression model given the relatively small difference in the sample populations. The primary difference between the first OLS regression, and the second is the inclusion of the *Financial Knowledge*, *Financial Skill*, and *Goal Confidence* variables.

Financial Knowledge was assessed by a respondent's objective knowledge of commonly used financial knowledge questions. Respondents in Model 1, on average, had financial knowledge scores of -0.04. Financial knowledge increased slightly to 0.13 for respondents in Model 2. Respondents in Models 3 and 4 had financial knowledge scores of -0.42 and -0.84, respectively. The output produced from the data set are the raw scores from the Knoll and Houts financial knowledge questionnaire. Negative values represent low objective knowledge scores while positive values notate higher objective knowledge scores given each questions varying discrimination values and overall level of difficulty as it relates to the probability of a correct answer (Knoll & Houts, 2012). Per the descriptive statistics, financial knowledge scores tend to get progressively worse the lower a household's federal poverty level status.

Households in Model 1 had a mean *Financial Skill* score of 50.80, which was slightly less than the 51.92 mean scores of individuals in Model 2. Higher financial skill scores represented how respondents described themselves as it relates to a series of statements related to financial skills. As with the mean financial knowledge score in Model 1, the means scores for Model 3 and 4 were lower than that of Model 1 and Model 2. Households in Model 3 had a mean financial skill score of 47.45. Households in Model 4 varied only slightly with a mean *Financial Skill* score of 46.79.

With regards to a respondent's perceptions of his or her ability to achieve their financial goals, *Goal Confidence*, respondents in Model 1 had mean confidence scores of 3.23. Respondents in Model 2 had a mean confidence score of 3.33 – noting only a slight difference Models 1 and 2. Scores within this range, between 2 and 3, signify, on average, that households were somewhat confident in their ability to achieve their financial goals. Respondents in Model 3 had a mean confidence score of 2.96. The mean score for respondents in Model 4 was 2.84. Households in this range, on average, were not very confident in their ability to achieve their financial goals.

Table 6. Descriptive Statistics for OLS Regression 2

	Model 1: Full Population		Model 2: > 199% of FPL		Model 3: 100% - 199% of		Model 4: < 100% of FPL	
	(*N* = 6,294)		(*N* = 4,816)		(*N* = 839)		(*N* = 639)	
Variables	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender								
Female	2,999	47.65	2,192	45.51	427	50.89	380	59.47
Male	3,295	52.35	2,624	54.49	412	49.11	259	40.53
Race								
Black	671	10.66	421	8.74	108	12.87	142	22.22
Hispanic	857	13.62	452	9.39	208	24.79	197	30.83
Other	331	5.26	261	5.42	36	4.29	34	5.32
White	4,435	70.46	3,682	76.45	487	58.05	266	41.63
Bonding Capital								
Yes	2,823	44.85	2,317	48.11	318	37.90	188	29.42
No	3,471	55.15	2,499	51.89	521	62.10	451	70.58
Bridging Capital								
Yes	2,597	41.26	1,951	40.51	362	43.15	284	44.44
No	3,697	58.74	2,865	59.49	477	56.85	355	55.56
Linking Capital								
Yes	2,394	38.04	2,134	44.31	173	20.62	552	86.38
No	3,900	61.96	2,682	55.69	666	79.38	87	13.62

	Mean (SD)	**(Min, Max)**	**Mean (SD)**	**(Min, Max)**	**Mean (SD)**	**(Min, Max)**	**Mean (SD)**	**(Min, Max)**
Age	4.46 (2.12) = 45 to 54	(1, 8)	4.63 (2.08) = 45 to 54	(1, 8)	4.33 (2.21) = 45 to 54	(1, 8)	3.37 (1.93) = 35 to 44	(1, 8)
Education	3.54 (1.14) = Some College	(1, 5)	3.80 (1.06) = Some College	(1, 5)	2.85 (1.02) = HS Degree	(1, 5)	2.53 (1.01) = HS Degree	(1, 5)
EndsMeets	1.46 (.65)	(1, 3)	1.34 (.55)	(1, 3)	1.74 (.69)	(1, 3)	1.99 (.71)	(1, 3)
Financial Knowledge	-0.04(.81)	(-2.05, 1.27)	0.13 (.75)	(-2.05, 1.27)	-0.42 (.74)	(-2.05, 1.27)	-0.84 (.65)	(-2.05, 1.27)
Financial Skill	50.80 (12.52)	(5, 85)	51.92 (11.89)	(5, 85)	47.45 (12.93)	(5, 85)	46.79 (14.75)	(5, 85)
Goal Confidence	3.23 (.73)	(1, 4)	3.33 (.66)	(1, 4)	2.96 (.78)	(1, 4)	2.84 (.84)	(1, 4)
Financial Well-Being	56.11 (14.07)	(14, 95)	58.74 (13.27	(14, 95)	49.24 (12.75)	(14, 95)	45.32 (13.31)	(14, 95)

OLS Regression Results for Research Question 1

The OLS results in Table 7, represent the findings from research question one. The purpose of this statistical analysis was to understand the impact of social capital, financial knowledge, skill, and goal confidence on financial well-being across federal poverty level status. As with the first OLS regressions analysis, results herein were grouped into four categories: full sample (Model 1), federal poverty level 200% + (Model 2), federal poverty level between 100% and 199% (Model 3), and federal poverty level below 100% (Model 1). In the paragraphs to follow, an overview of the key findings for each model will be provided.

OLS Regression Results for Model 1

Model 1, representing the full sample population, had 6,294 observations. The r-squared and adjusted r squared values for the regression analysis were .59 and .58, respectively. As such, the findings for the statistical model ran explained 59% of the model variance.

As it relates to social capital, the OLS regression results found that only *Bridging* capital produced a significant result in the model. Households who sought financial advice from this social capital network had financial well-being scores that were 0.68 points less than households that did not. *Bonding* and *Linking* capital, which were significant and positively associated with financial well-being in the first OLS regression, are not statistically significant in this model.

The *Financial Skill Score* covariate produced a highly statistically significant result in the model. Financial skill was positively associated with financial well-being. Consequently, for each unit increase in financial skill, a household's financial well-being improved by 0.19 points. *Goal Confidence*, another covariate added to the model, was highly significant as well: higher levels of confidence in one's ability to achieve their financial goals resulted in a 3.42 increase in financial well-being.

Of the control variables included in the model, *Age, Race, Income, and EndsMeets* were significant and associated with financial well-being. Age was split into three groups where *Age 2*

was used as the reference point in the model. The OLS analysis showed that respondents in the *Age 1* grouping had financial well-being scores that were 0.96 points less than respondents in the reference group. Respondents in the *Age 3* grouping had financial well-being scores that were 5.30 points higher than the reference group. Both findings were highly significant. Race, similar to that of the age variable, was split into 4 groupings, where *Race: White*, served as the reference point. Hispanic households were showed to have financial well-being scores that were 1.26 points higher than their white counterparts.

As it relates to income, households in the *Income 1* and *Income 2* groupings had financial well-being scores that were 2.76 and 1.61 points less than the reference group — *Income 3*. Both findings were highly significant. Households in the *Income 5* grouping had financial well-being scores that were 2.72 points higher than the reference group. This finding was highly significant as well.

The *EndsMeets* variable was grouped into three categories where *EndsMeets 2* served as the reference group. Households in the *EndsMeets1* category had financial well-being scores that were 9.96 points higher than the reference group. Households in the *EndsMeets3* category had had financial well-being scores that were 8.04 points less than the reference group. Both findings were highly significant.

Regression Results and Analysis for Model 2

Model 2, representing households above 200% of the federal poverty level, had 4,816 observations. The r-squared and adjusted r-squared values for the regression analysis were .59 and .58, respectively. Findings for the statistical model ran explained 49% of the model variance as it relates to the association between social capital (independent variable) and its impact on financial well-being (dependent variable).

As with Model 1 of this analysis, the OLS regression results found that only *Bridging* capital produced a significant result in the model. Households who sought financial advice from this social capital network had financial well-being scores that were 1.08 points less than households that did not. *Financial Knowledge* was also statistically significant. This is the only model in which a respondent's financial knowledge produced a significant result. A unit increase in a respondent's financial knowledge improved his or her financial well-being by 0.62 points.

The *Financial Skill Score* covariate was statistically. Financial skill was positively associated with financial well-being. Consequently, for each unit increase in financial skill, a household's financial well-being improved by 0.22 points. *Goal Confidence* was also highly significant; higher levels of confidence in one's ability to achieve their financial goals resulted in a 3.98 increase in financial well-being. Both findings were highly significant.

Age, Income, and EndsMeets were significant and associated with financial well-being. With regards to age, the OLS analysis showed that respondents in the *Age 3* grouping had financial well-being scores that were 5.52 points higher than respondents in the reference group. Concerning household income, households in the *Income 2* groupings had financial well-being scores that were 1.42 points less than the reference group. Households in the *Income 4* and *Income 5* groupings had financial well-being scores that were 0.78 and 2.63 points higher than the reference group. The findings for *Age 3*, *Income 2*, and *Income 5* were highly significant.

EndsMeets was significant and strongly associated with financial well-being. Households in the *EndsMeets1* category had financial well-being scores that were 9.94 points higher than the reference group. Households in the *EndsMeets3* category had had financial well-being scores that were 8.14 points less than the reference group.

Regression Results and Analysis for Model 3

Model 3, representing households between 100 and 199% of the federal poverty level, had 839 observations. The r-squared and adjusted r-squared values for the regression analysis were .47 and .46, respectively. The findings from the statistical analysis explained 47% of the model variance.

Moreover, none of the social capital constructs were significantly significant for this population. *Financial Skill* and *Goal Confidence* were significant and positively associated with financial well-being. For each unit increase in financial skill, a household's financial well-being improved by 0.12 points. Higher levels of confidence in one's ability to achieve his or her financial goals resulted in a 2.11 increase in financial well-being.

Age, Race, Income, and EndsMeets were significant and highly associated with financial well-being. The analysis showed that respondents in the *Age 1* grouping had financial well-being scores that were 2.81 points lower than respondents than the reference group. Respondents in the *Age 3* grouping had financial well-being scores that were 4.27 points higher than the reference group. Concerning ethnicity, Hispanics were found to have financial well-being scores that were 2.25 points higher than their White counterparts.

Households in the *Income 1*, *Income 2, and Income 4* groupings had financial well-being scores that were 5.67, 4.10, and 6.26 points less than the reference group. The *Income 5* grouping did not have any statistical output. This is due to the fact that respondents in Model 3 did not have incomes above $150,000. Households in the *EndsMeets1* category had financial well-being scores that were 10.62 points higher than the reference group. Households in the *EndsMeets3* category had financial well-being scores that were 7.67 points less than the reference group. All of which were highly significant.

Regression Results and Analysis for Model 4

Model 4, representing households below 100% of the federal poverty level, had 644 observations. The r-squared and adjusted r squared values for the regression analysis were .35 and .34, respectively. The findings for the statistical model ran explained 35% of the model variance as it relates to the association between social capital (independent variable) and its impact on financial well-being (dependent variable).

Bonding, Bridging, and *Linking* capital, as with Model 3, were not found to be associated with financial well-being. Consequently, the use of social capital, for households below 200% of the federal poverty level has no influence on the financial well-being of these populations. *Financial Skill,* however, was highly significant and positively associated with financial well-being. A unit increase in financial skill improved a household's financial well-being by .13 points. *Goal Confidence* was also highly significant and positively associated with financial well-being. Higher levels of goal confidence increased financial well-being by 2.98 points.

Age, Race, Education, and EndsMeets were significant and associated with financial well-being. The analysis showed that respondents in the *Age 3* grouping had financial well-being scores that were 5.12 points higher than respondents in the reference group. With regards to race, Hispanic households had financial well-being scores that were 2.67 points higher than their White counterparts.

Moreover, *Education*, which was not significant in the other models, was highly significant and positively associated with financial well-being. Households with at least a bachelor's degree had financial well-being scores that were 3.53 points higher than those that did not. With regards to a household's ability to make ends meet, respondents in the *EndsMeets1* category had financial well-being scores that were 6.72 points higher than the reference group.

Households in the *EndsMeets3* category had financial well-being scores that were 9.37 points less than the reference group.

Table 7. OLS Regression 2: The Impact of Social Capital, Financial Knowledge, Skill, and Attitudes, on Financial Well-Being

	Model 1: Full Sample		Model 2: >199% of FPL		Model 3: 100% - 199% of		Model 4: < 100% of FPL	
Variables	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error	Coefficients	Standard Error
Social Capital								
Bonding	0.52	0.27	0.32	0.29	0.73	0.74	0.70	0.70
Bridging	-0.68 *	0.28	-1.08 ***	0.31	1.15	0.73	-0.75	-0.75
Linking	0.43	0.28	0.47	0.31	0.30	0.76	-1.37	-1.37
Financial Knowledge								
Financial Knowledge	0.32	0.21	0.62 *	0.24	-0.77	0.53	-0.75	0.72
Fiancial Skill								
Financial Skill Score	0.19 ***	0.02	0.22 ***	0.02	0.12 **	0.04	0.13 ***	0.04
Financial Attitudes								
Goal Confidence	3.42 ***	0.25	3.98 ***	0.28	2.11 ***	0.60	2.98 ***	0.68
Controls								
Age 1	-0.96 **	0.35	-0.50	0.40	-2.81 **	0.91	-0.74	0.97
Age 3	5.30 ***	0.31	5.52 ***	0.32	4.27 ***	0.89	5.12 ***	1.29
Gender	-0.07	0.27	0.16	0.30	0.47	0.71	-1.08	0.92
Race: Black	0.27	0.45	0.39	0.56	0.71	1.04	-1.02	1.15
Race: Other	-0.50	0.59	0.12	0.64	-0.99	1.86	-2.49	1.58
Race: Hispanic	1.26 *	0.44	-0.28	0.54	2.25 *	0.90	2.67 *	1.07
Education	0.34	0.30	-0.19	0.32	1.54	0.91	3.53 **	1.27
Income 1	-2.76 ***	0.44	-1.08	1.32	-5.67 ***	1.51	-	-
Income 2	-1.61 ***	0.43	-1.42 **	0.48	-4.1 **	1.49	-0.11	1.91
Income 4	0.66	0.36	0.78 *	0.36	-6.26 ***	1.80	-	-
Income 5	2.72 ***	0.47	2.63 ***	0.48	-	-	-	-
EndsMeets1	9.96 ***	0.31	9.94 ***	0.35	10.62 ***	0.76	6.72 ***	1.09
EndsMeets 3	-8.04 ***	0.62	-8.14 ***	0.96	-7.67 ***	1.19	-9.37 ***	1.10
Constant								
Constant	27.99 ***	0.85	24.74 ***	0.99	35.91	2.35	30.12 ***	2.27
Observations	6,294		4,816		839		639	
R-squared	0.59		0.59		0.47		0.43	
Adjusted R squared	0.58		0.58		0.46		0.41	

*p<0.05. **p<0.01. ***p<0.001.

Summary

The results from the OLS analyses found similarities and differences in the way certain variables impacted financial well-being for the general population and households with differing federal poverty level (FPL) statuses. Generally, households representing the general population, Model 1, were most similar to households with an FPL of 200% and higher – Model 2. The same held true for Models 3 and 4, which represented households below 200% of the federal poverty level status. A more in-depth discussion of the implications of these findings will be explored in the discussion section.

CHAPTER 5

DISCUSSION

Financial well-being was defined by the CFPB (2017, p. 13) "as a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future and can make choices that allow them to enjoy life." The comprehensive scope of CFPB's financial well-being definition established the foundation for the work presented herein. An effort rooted in the desire to understand and improve the financial well-being of all households. The first research question explored whether or not the use of various types of social capital has a direct effect on financial well-being while controlling for variables like age, gender, education, race, and income. Are these findings similar or different across federal poverty status? The second research question expanded the statistical model a step further by measuring the impact of social capital when other covariates are introduced into the model such as financial knowledge, skill, and attitudes. And, as with the first model, do the effects hold for different socio-economic status?

Discussion: OLS Regression of Social Capital's Impact on Financial Well-Being

This research added to the existing literature by measuring the impact of bonding, bridging, and linking capital on financial well-being. At present, there is no literature that explores these constructs and their effect on financial well-being. The findings presented herein are the first of their kind and provide some fascinating insights on how one's use of social capital impacts their financial well-being.

The most salient finding across the models was that the constructs of social capital were significant for households above 200% of the federal poverty level status. Social capital was not

significant for households below 200% of the federal poverty level. This finding is surprising as research on social capital (Erickson, 2017; Hanka & Engbers, 2017) and help-seeking behaviors (Alyousif & Lalenkoski, 2017) suggest that household's experience higher levels of economic when they utilize social support. Given the financial constraints of households below 200% of the federal poverty level, it would be the expectation that the use of some, if not all levels of social capital, would be more pronounced. This, however, is not the case.

One likely explanation for this finding is inherent in the construct of social capital itself. Coleman (1988) posits that social capital, in a general sense, is the reflection of the way agents express agency within a system that is tethered together based on trust, group-based norms, and sanctions. Consequently, households below 200% of the federal poverty level are operating within systems with less economic diversity. As such, it could be considered pointless to leverage social capital that is experiencing the same financial circumstances that you are experiencing.

A second explanation for this finding could be contributed to the paradigm of low-income households. Luttmer (2005), a subjective well-being researcher, found that a person's reference group was associated with their own life satisfaction. His study showed that low-income households tended to have higher levels of subjective well-being when they lived in communities with other low-income households and that high-income households had lower levels of subjective well-being when they lived amongst their peers. The relationships reversed when low and high-income household's served as the reference group. When coupled with the first explanation, financial hardship might not feel as hard when a household's social capital is experiencing and operating within the context of the same financial constraints. The shared normalization of one's financial circumstances may suppress the desire to leverage social capital.

Moreover, there are psychological and emotional aspects that may contribute to these findings as well. Studies consistently show that the stressors associated with poverty lead to suboptimal financial decision making (Haushofer &Fehr, 2014). With regards to effectively leveraging one's social capital, it could then be posited that these same stressors could diminish one's capacity to use social capital or result to using alternative forms of social capital that are not captured within the construct of this research. Concerning one's emotional state, a study by Rantakeisu, Starrin, and Hagquist (1999) found a correlation between an individual's level of financial hardship and the number of shaming experiences that individual experienced. In other words, as financial hardship increased, the number of shaming experiences that individual was likely to encounter increased as well. Thusly, it could also be posited that households below 200% of the federal level are not leveraging their social capital due to the expectation of experiencing financial shame. This may also be contributing to the significant and negative association that bridging capital has in Models 1 and Models 2.

The findings from this analysis do not address the particular reasons for the differences between the usage of social capital for households above or below 200% of the federal poverty level threshold; however, what can be inferred is that helping households get above 200% of the federal poverty level threshold will result in the added benefit of social capital, bonding and bridging capital, on financial well-being.

Control Variables

The statistical results for the control variables were not as cleanly split across federal poverty level status as the results for the social capital constructs. Age, generally, was statistically significant and positively associated with financial well-being. Older respondents had higher levels of financial well-being than respondents who were middle-aged. Model 3 was

the only model that produced a significant and negatively associated finding for younger respondents in relation to middle-aged respondents. The findings are consistent with the literature.

Race was also found to be significant in two of the three models. Hispanic households were found, in both instances, to have higher levels of financial well-being in Models 1 and 4 when compared to their White counterparts. This was not true for Black and Other respondents. Research has found that Black and Hispanic households tend to have higher levels of subjective well-being (Kapteyn, et al., 2015) than their White counterparts; however, as it relates to financial well-being, Hispanic households tend to vary in a significant way from the reference group in the analysis at various points across federal poverty level status.

Unexpectedly, earning a bachelor's degree or higher did not have more of a pronounced effect across each of the models. When significant, in Models 1 and 4, education was positively associated with financial well-being. The relationship between *Education* and *Financial Well-Being* is consistent with what is found in the literature.

Education is also correlated with income. Generally, as one's level of education increases, their expected level of earnings increases as well. Income, another control variable, was found to be significant across Models 1, 2, and 3. The findings demonstrated that lower income earners tended to have lower levels of financial well-being when compared with the reference group. And that higher income earners had higher earnings than the reference point. This finding is intuitive and consistent with the literature. Studies have consistently found that higher levels of income improve life satisfaction (Diener & Oishi, 2018)

Lastly, a household's ability to make ends meet was highly significant and positively associated with financial well-being. What's more, the effect size associated with a household's

ability to make ends meet was much larger than any of the other covariates across each of the four models. These findings are consistent with the current literature. A study by Livermore, Powers, Davis, and Lim (2010) found that a household's ability to make ends meet resulted in greater financial stability and less financial stress than households who were less likely to be able to make ends meet. The addition of this covariate is important to the data analysis in that it captures the objective financial circumstances of a household. It cannot be assumed that just because a household earns more money than another that the higher earning household is better able to make his or her ends meet. There is a subjective element of financial well-being that is captured with the ends meets variable. That element is most pronounced for households below 200% of the federal poverty level. Some households, while facing similar financial constraints as others, are still able to consistently make ends meet while others within that population are unable to do the same.

Discussion: OLS Regression of Social Capital, Financial Knowledge, Skill, and Attitudes on Financial Well-Being

The subsequent regression analysis to the first research question was ran to understand whether the effects of social capital still held with the inclusion of other covariates frequently found in the literature: financial knowledge, skill, and attitudes. As with the first analysis, the findings from this research provide a contribution to the literature in that the construct of social capital has yet to be understood with regards to its impact on financial well-being for the general population or across federal poverty level status.

Concerning social capital, bridging capital was the only social capital construct that produced a significant result. And, like the first regression analysis, bridging capital was negatively associated with financial well-being. These findings were significant only for

households above 200% of the federal poverty level status. For households above 200% of the federal poverty level status, the negative relationship between bridging capital and financial well-being could be attributed to many factors – financial shame being among them. There is much left to be explored as to why there is a negative effect on this social capital construct.

Financial knowledge, where the research clearly demonstrates mixed results on its effect to improve one's financial well-being, was only significant for households above 200% of the federal poverty level. This finding is logical given the types of questions that are presented in financial literacy questionnaires. It could be argued that questions pertaining to economics, interest rates, diversification, time value of money, and investing are biased towards middle-class households who are more likely to want to understand these concepts because of its impact on their ability to buy home, save their nest egg and, generally speaking, plan for the future. Such questions may not be effective measures of financial well-being for various segments of the population. Households below 200% of the federal poverty level, due to their financial constraints, may have less familiarity and exposure to the financial norms of the middle class. And, as a consequence, financial knowledge may be an ineffective way to improve financial well-being for low-income households who lack the resources to act upon the knowledge acquired (Huston, 2010).

Unlike financial knowledge, financial skill was highly significant and positively associated with financial well-being across all four models. Financial skill measured how well or often an individual engaged in certain financial behaviors related to understanding and using financial information as well as demonstrating impulse control. Although more general in nature, the financial skill measure appears to be a better predictor of financial well-being than financial knowledge. What's more, the questions posed within the financial skill measure are not biased

towards any segment population of the population. The context might be different; however, the actual skill is transferable regardless of socio-economic status.

The third covariate, goal confidence, was also highly significant and positively associated with financial well-being across all four models. The effect size for goal confidence was much larger than that of social capital, financial knowledge, and financial skill combined in each of the four models. The relationship between goal confidence and financial well-being is consistent with the literature (Farrell, Fry, & Risse, 2016; Henager & Cude, 2014). These findings suggest, from a financial well-being intervention perspective, that an individual's confidence in his or her ability to achieve his or her goals is just as important as the intervention itself.

Controls

A respondent's age, race, education, income, and ability to make ends meet was found to be statistically significant to varying degrees across each of the four models. Age, generally, was statistically significant and positively associated with financial well-being. Older respondents had higher levels of financial well-being than respondents who were middle-aged. Models 1 and 3 showed a significant and negatively associated relationship for younger respondent's financial well-being when compared to middle-aged respondents. The relationships between age and financial well-being mirror are similar to the relationships found in the first regression analysis. These findings are consistent with the existing literature.

Race, similar to the first regression model, found that Hispanic households had financial well-being scores higher than their White counterparts in Models 1, 3, and 4. Unlike the first regression analysis, education was only significant and positively associated with well-being in Model 4. In other words, households with at least a bachelor's degree or higher living below 100% of the federal poverty level had higher well-being scores than individuals without a college

degree. The finding may be reflected in the differences between generational poverty and situational poverty. Hence, the context in which someone is experiencing poverty may be influencing the results. For instance, generational poverty is when a household is exposed two or more generations of poverty; the onset of situational poverty is due to unforeseen financial shocks or circumstances: death, illness, and divorce (Payne, DeVol, and Smith, 2006). As such, education may change the context in which someone experiences their poverty and expectations about their future financial well-being.

Income was highly significant and either positive or negatively associated with Models 1, 2, and 3. These findings show that households with income levels below the reference group had lower levels of financial well-being while the reverse was true for households with incomes above the reference group. These findings, as noted with the first regression analysis, are consistent with the findings from the literature. That said, the variable assessing a household's ability to make ends meet was included in the model to provide the context that income alone could not provide. Households that were able to make ends meet had financial well-being scores that were much higher than the reference group. The reverse was true for households that struggled to make ends meet. These findings were consistent across each model and are reflective of what is found in the literature.

Policy Implications

The findings from this research have many research implications as it relates to addressing the call to improve the financial well-being of households. First, a positive association was found to exist between how an individual utilizes social capital and its impact on financial well-being. This study demonstrated that households above 200% of the federal poverty level benefited the most from bonding and linking capital while households below 200% of the

federal poverty level did not. This finding is worrisome given that low-income households are in most need of additional support to successfully navigate the monetary and psychological stressors associated with poverty.

Moreover, the findings herein suggest that more can be done within low-income communities to identify and support the outreach efforts that are proving to be effective. Although this study does not address why the social capital constructs do not have a significant impact on financial well-being for low-income households, a study by Xu and Zia (2010) found that financial outreach efforts have been found to have a spill-over effect within social networks. In other words, focusing on identifying and supporting pre-existing informal networks, an inside out approach, might be the most effective strategy to bring awareness to and encourage desirable behaviors within a social network. Corbett and Fikkert (2004) state that "one of the biggest problems in poverty alleviation efforts is that their design and implementation exacerbates the poverty of being of the economically poor – their feelings of inferiority and shame" (p. 3). Said another way, current efforts focus on fixing the problem instead of providing the necessary resources and support necessary to help those within the community resolve their own problems.

Second, while providing financial support to these communities is imperative, how these resources are provided are paramount as well. A significant amount of resources are being poured into financial literacy efforts. These initiatives, in large part, focus on improving the objective knowledge of individuals in the domains of budgeting, saving/investing, insurance and investing (Remund, 2010). The findings from this study show that financial knowledge only improves the financial well-being of households that are above 200% of the federal poverty level. Otherwise, whether for the general population or households below 200% of the federal poverty level, financial knowledge has no effect on a household's ability to have financial

security in the present and in the future. Financial literacy efforts, per the findings herein, are only effective for households who have the financial capacity to operationalize the financial concepts taught and measured during most financial literacy interventions.

That said, financial skill was highly significant and positively associated with financial well-being. Individuals with higher levels of financial skill, regardless of socio-economic status, were able to improve their financial well-being. This is an important finding with great policy implications. Instead of focusing on financial knowledge, it may be more beneficial for outreach interventions to focus on helping household's identify and improve upon their financial skills. Unlike financial knowledge, after any given intervention, a participant would be able to immediately operationalize their ability to read and interpret financial information or how to use empirically proven strategies to cultivate greater impulse control within the context of their situation. As noted by Huston (2010), an individual may have greater financial knowledge after a given intervention but is unable to operationalize said knowledge due to financial or situational constraints. The time in which one can see the immediate impact of an intervention may also lead to higher levels of self-efficacy.

Third, self-efficacy, goal confidence for the purposes of this research, was positively associated with financial well-being across all four Models. Focusing financial well-being initiatives on financial skill, rather than financial knowledge, may help bolster confidence for the aforementioned reasons. What's more, household confidence could be further supported by supporting the social capital network mechanisms within a community to help provide help and support long after the immediate impact of an intervention. Many researchers have proposed the use of just-in-time interventions to address the research that identifies the limitation of financial literacy interventions (Fernandes, Lynch, & Netemeyer, 2014; Hensley, 2015). However, point-

in-time financial well-being interventions may be more of a matter of creating a system within a system where people within the system are empowered to address the needs of their social networks at given points in time, over the entirety of an individual's time horizon, based on a deep understanding of situational context as opposed to a more reactionary process by which unfamiliar financial professionals only intercede when solicited for help.

The research and policy implications are clear. Researchers and policymakers must take social capital and federal poverty level status into consideration when identifying and supporting financial well-being initiatives. While studies continue to emerge that demonstrate the general effectiveness of financial literacy (Batty, Collins, & Odders-White, 2015; Bell, Goren, & Hogarth, 2009; Lyons, 2007), these studies do not isolate for the impact of said knowledge on the financial well-being of households across federal poverty level status. The results from this study clearly show that other factors such as social capital, financial skill, and attitudes are more effective means of addressing financial instability than the current movementt just to improve knowledge.

Limitations

When interpreting the findings presented herein, it is important to consider the limitations of the data analysis. First, this study only demonstrates that there are significant associations between the independent and dependent variables. The findings from this research do not establish causality. More work must be done to establish causal relationships.

Another important limitation pertaining to this study is that it is cross-sectional data set. Cross-sectional data captures a snapshot of the data collected at one point in time. As a consequence, the findings from the study only reflect the responses from respondents and the

point and time in which they were collected. The research is limited in that the findings cannot be used to analyze the associations established herein overtime.

Another noticeable limitation of the study is due to sampling size. As with many studies that seek to isolate within group samples, the corresponding outcome is a reduction in the sample. Model 1 differs from Model 2 by 1,500 observations, roughly. Model 2 differs from Model 3 by 3,978 observations, roughly. And Model 3 differs from Model 4 by 188 observations, roughly.

Consequently, as the sample size for a population decreases a data analysis is affected due to a reduction in the power of the statistical analysis. In other words, analyzing two models with noticeably different sample populations means that the model with a fewer number of observations is expected to be less precise than a model with more observations. Despite these limitations, a sample population of 500 or more respondents is sufficient enough to reduce the margin of error in the findings to 4.5% (Remler & Ryzin, 2015). Each model used within the analysis, despite the differences in sample size,

Moreover, there were additional limitations in the use of the social capital construct. The bonding, bridging, and linking capital variables were constructed based on the general expectations of one's relationship with formal and informal networks. Doing so does not take into consideration how an individual perceives the quality of these relationships at the household level. It is likely that some households might identify with seeking financial advice from a parent over a spouse or from a financial coach rather than a significant other. Determining the relationship under social capital constructs is one thing; however, measuring the strength of the connection is an entirely different assessment.

The social capital variables presented additional issues in that the question used for the social capital questions was limited to asking for financial advice. Due to the complex ways in which communities share and disseminate information within their networks, there are additional opportunities to consider other questions on how an individual utilizes his or her social capital to achieve higher levels of financial well-being. These questions could range from "How do you inquire about financial opportunities or deals?" or "Whom do you seek out to find good job opportunities?" In either case, there is an opportunity to explore, more thoroughly, the subtle ways in which social capital is leveraged to improve financial well-being.

In light of the limitations of this research, the findings suggest that the constructs of social capital as well as how they are used to improve financial well-being is worth exploring further. The findings also support a need to focus on financial skill and goal confidence rather than financial knowledge to improve financial well-being. Given the continued narrative of financial distress across America, it is essential to understand what factors impact the financial well-being of households across federal poverty level status just as much as those gleaned from findings for the general population. Context matters. The findings herein provide evidence that there are both similarities and differences in the way financial well-being is impacted across federal poverty level status. As such, this research provides a unique perspective and meaningful contribution to the pre-existing literature and evolving efforts to improve the financial well-being of households regardless of socio-economic status.

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Appendices

Appendix A: Financial Well-Being Scale

	Questions	Response Options
	How well does this statement describe your situation?	
(1)	I could handle a major unexpected expense	0 = Not at all
(2)	I am securing my financial future	1 = Very little
(3)	Because of my money situation, I feel like I will never have the things I want in life*	2 = Somewhat 3 = Very Well
(4)	I can enjoy life because of the way I'm managing my money	4 = Completely
(5)	I am just getting by financially*	
(6)	I am concerned that the money I have or will save won't last	

	Questions	Response Options
	How often does this statement apply to you?	
(7)	Giving a gift for a wedding, birthday or another occasion would put a strain on my finances for the month*	0 = Never 1 = Rarely
(8)	I have money left over at the end of the month	2 = Sometimes
(9)	I am behind with my finances*	3 = Often
(10)	My finances control my life*	4 = Always

*** Denotes questions for which the response options are "reverse coded"**

Appendix B: Financial Skills Scale

	Questions	Response Options
	How well does this statement describe your situation?	
(1)	I know how to make complex financial decisions	0 = Describes me not at all
(2)	I am able to make good financial decisions that are new to me	1 = Describes me very little 2 = Describes me somewhat
(3)	I know how to get myself to follow through on my financial intentions	3 = Describes me very well 4 = Describes me completely
(4)	I am able to recognize a good financial investment	
(5)	I know how to keep myself from spending too much	
(6)	I know how to make myself save	
(7)		

	I know where to find the advice I need to make decisions involving money	
	Questions	**Response Options**
	How often does this statement apply to you?	
(8)	I know when I do not have enough information to make a good decision involving money	0 = Never 1 = Rarely
(9)	I know when I need advice about money	2 = Sometimes
(10)	I struggle to understand financial information*	3 = Often 4 = Always

*** Denotes questions for which the response options are "reverse coded"**