

THE ROLE OF GENDER ON SOCIAL CAPITAL AND ABILITY TO BORROW  
FUNDS BY ENTREPRENEURS

by

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## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS .....	iv
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
ABSTRACT .....	ix
 CHAPTER	
I. INTRODUCTION.....	1
Types of Social Capital .....	5
Sources of Social Capital.....	7
II. THEORETICAL FRAMEWORK.....	12
Role Congruity Theory .....	12
Entrepreneurial Access to Financial Capital .....	13
Social Capital and Financing for Entrepreneurial Ventures .....	14
Gender Differences in Entrepreneurship .....	16
Gender Differences in Social Capital .....	18
III. METHODS.....	22
Participants .....	22
Measures/Data Gathering .....	25
IV. RESULTS.....	28
Variables .....	28
Regressions.....	30

V. DISCUSSION.....	35
Implications .....	36
Limitations.....	37
Future Research .....	38
APPENDIX SECTION .....	39
REFERENCES .....	47

## LIST OF TABLES

Table	Page
1. Highest Education .....	24
2. Race/Ethnicity .....	24
3. Types of Financing by Gender .....	27
4. Means of Total Social Capital by Gender .....	28
5. Correlations of Variables.....	29
6. Hypothesis 1 Regression .....	30
7. Hypothesis 2 Regression .....	32
8. Hypothesis 3 Regression .....	33

## LIST OF FIGURES

Figure	Page
1. Figure 1.....	3
2. Figure 2.....	6
3. Figure 3.....	13



## **ABSTRACT**

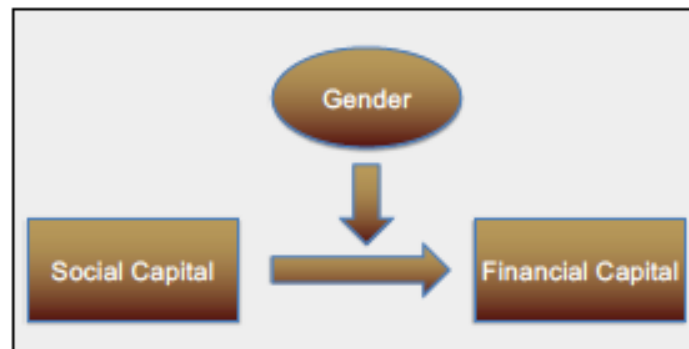
Social capital is proving to be an emerging area of study in the overall study of entrepreneurship. The importance of capital, in all its forms, in achieving successful entrepreneurial outcomes cannot be overstated. This thesis explores the relationship of social capital to the acquisition of financial capital, specifically borrowed funds, and the moderating effect that gender may play. Understanding whether gender may play a role in the use of social capital amongst entrepreneurs in order to gain financial capital is important because while the number of women-owned businesses is increasing, the literature points out that there are still barriers to success. Additionally, using the framework of role congruity theory, the question of whether gender plays a moderating role in increasing social capital, thereby resulting in increases in financial capital acquired through borrowing is examined. This thesis advances the literature through the exploration of three hypotheses. The first is that there is a positive relationship between an entrepreneur's level of social capital and ability to borrow funds. The second hypothesis is that male entrepreneurs receive more external funding through borrowing than female entrepreneurs. The final hypothesis is that the relationship between an entrepreneur's social capital and borrowed funds is stronger for men than for women. Regression analysis supported hypotheses 1 and 2 but did not support hypothesis 3. These findings can support improvements among practitioners who help entrepreneurs seek positive outcomes.

## I. INTRODUCTION

Business ventures have increased notably at an annual rate of 7.71%, more than doubling over the past ten years (*Business Formation Statistics*, 2022). This increase in entrepreneurial activity has led to an increase in the interest in the factors that play a role in the success of small businesses (Brazeal & Herbert, 1999; Gedajlovic et al., 2013). Although the number of new women-owned businesses far outpaced that of men, “women face more obstacles than entrepreneurs in general when starting and growing their businesses” (*The 2019 State of Women-Owned Business Report*, p. 2). The acquisition, maintenance, and effective use of capital, such as human and financial capital, to entrepreneurial success cannot be overstated (Fairlie & Robb, 2009). One of the emerging factors that may play a role in entrepreneurship is social capital (Gedajlovic et al., 2013). Social capital is an investment in interpersonal relations with the expectation of the investments being useful in the marketplace (Lin, 2001). There are competing views on whether social capital should be defined as only the structure of the network relationships themselves or should include the resources that these relationships enable the entrepreneur to access. Nahapiet and Ghoshal (1998) define social capital as “...the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit” (p. 243). Like other forms of capital, it is invested into an enterprise and then processed and mobilized to produce a profit (Lin, 2001). Despite differences among the various forms of capital, social capital has been found to be as important as other forms of capital in predicting entrepreneurial outcomes.

The role of social capital in entrepreneurship focuses largely on the access to and proper use of resources. These resources may be varied. They could be physical, like the acquisition of a piece of technology such as a computer system, or financial, like a business loan. Acquiring employees or partners with particular skills through one's network would be an example of social capital's impact on the acquisition of human capital. Entrepreneurial resourcefulness requires the breaking of boundaries via the proper deployment of resources that create or entail unexpected value for the entrepreneur (Williams et al., 2021). This multifaceted endeavor of entrepreneurship is conducted at the intersection of change, innovation, and creativity (Brazeal & Herbert, 1999) and is often predicated upon the entrepreneur's ability to gain access to, and leverage, various resources. Social capital is a means through which an entrepreneur gains access to and leverages resources such as human and financial resources (Coleman, 1988). Social capital is important because it allows for the exchange and/or acquisition of resources that can be important for business start-up, survival, and success (Kim & Aldrich, 2005; Stam et al., 2014). Accordingly, social capital is integral to various aspects of entrepreneurship ranging from entrepreneurial intent to innovation to financing (Gedajlovic et al., 2013). Understanding social capital and what impact it has on entrepreneurs is imperative to understanding the "processes and outcomes of social interactions at multiple levels of analysis and across a diverse set of situations and contexts" (Gedajlovic et al., 2013, p. 456). Because financial capital is a readily measurable resource that every business requires, this thesis seeks to explore the relationship between social capital and financial capital acquired by the entrepreneur. Additionally, there is ample evidence in the literature to suggest there are differences in

the acquisition of financial resources between male and female-owned business(Mijid, 2014; Robichaud et al., 2019; Wilson, 2016). Therefore, this study seeks to examine the role of gender as a moderator of the relationship (see figure 1).



*Figure 1*

Because of the non-fungible nature of social capital, it serves mainly to give access to various other forms of capital and assistance in determining how best to use it. However, the simple possession of social capital does not necessarily result in its proper and effective mobilization (Kwon & Adler, 2014). Although utilization is frequently considered with physical and financial resources, it is also important to consider the utilization of social capital. Social capital can be an incredibly valuable source of resources for entrepreneurs, especially in the start-up phase. For enterprises with limited collateral or resources, social capital can serve to provide access to venture capital to gain access to those resources. Venture capital can be especially important, not only because of the access it provides to financial resources but human resources as well (Shao & Sun, 2021). Social capital can also be used to gain access to the skills that an entrepreneur

may need to succeed. In sum, social capital is fundamentally essential to the acquisition of a variety of resources that play a critical role in the success of entrepreneurial ventures.

However, some characteristics of social capital may be useless or even harmful to entrepreneurs seeking to use social capital to gain resources (Coleman, 1988; Light & Dana, 2013; Williams et al., 2021). Despite the utility of social capital, strong bonding ties could create network closure that may not only limit individual actors' freedom of choice due to the high levels of norm adherence that these types of networks create but also limit diversity in these networks (Gedajlovic et al., 2013). Limited diversity in networks means that networks tend to display an increase in homophily, or the tendency for individual actors to seek out those who are similar to themselves. For example, there is a certain incongruity in how there has been a rise of entrepreneurial networks that are predominately female while investor networks have remained predominately male (Carter et al., 2003; Gedajlovic et al., 2013). This results in female entrepreneurial networks having fewer bridging ties to predominately male investor networks, which may serve as a barrier to access to investors. Unequal access to financial capital and especially the networks that may lead to investors or lenders can be created and perpetuated by inequalities in acquisition of social capital. When groups that have power or more access to resources, intentionally or inadvertently, suppress resources, monopolies can create barriers to access those resources (Light & Dana, 2013).

Further, strong ties can have a dark side too, as "strong solidarity with ingroup members may over-embed the actor in the relationship, such over-embeddedness reduces the flow of new ideas into the group resulting in parochialism and inertia" (Adler & Kwon, 2002, p. 30). This can manifest as reduced objectivity, mediocrity, and the

creation of barriers for historically disadvantaged groups such as women or minorities (Neumeyer et al., 2019). “The inequalities characterizing contemporary social relations—of wealth and income, between races and genders—shape social capital and, in turn, social capital is implicated in both the reproduction of these inequalities and in movements to challenge them” (Kwon & Adler, 2014, pp. 417-418). Understanding the role that social capital has in entrepreneurial outcomes and overcoming these barriers can be helpful both from an academic as well as a practical perspective in driving better outcomes.

### **Types of Social Capital**

Social capital is comprised of both external ties and internal ties. External ties are those relations that link actors outside a given social network and internal ties are the relations that create solidarity with actors inside a given social network. These forms of social capital are often referred to as bridging, bonding, and linking, respectively (see figure 2). Bonding social capital is the internal linkages that create cohesion and facilitate the achievement of shared goals. Bridging social capital is the connection that actors have to other actors in different networks (Adler & Kwon, 2002). Linking social capital is really a special form of bridging social capital among unequal agents where the relationship with the agent who has more power gives the agent with less power a bridge to a different network (Lin, 2001; Szreter, 2002). Agents can be unequal in terms of power or access to resources, such as financial resources. Linking social capital, then, is important because it can create access to unavailable resources for those with less power from those with more power. Szreter (2002) describes the study of linking as a way to

analyze the quality of relationships that business organizations develop with the communities in which they operate. These forms of social capital are the result of the nature of the relationships among actors, the emotional intensity of interactions between the actors, the frequency of interaction, and the multiplexity or overlap of roles. The strength of the tie between actors is "a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (Granovetter, 1973, p. 1361). Close relationships, such as kin relationships, that include a high frequency of contact and have high multiplexity result in strong ties. Relationships that are more distant and lack emotional intensity, and frequency, and have less overlap of roles result in weak ties (Neumeyer et al., 2019).

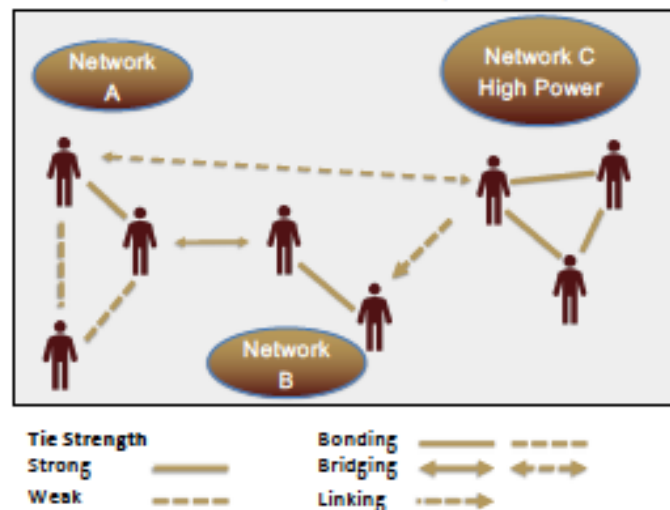


Figure 2

Individual actors within a particular network have characteristics as well as information that are homophilous with others within that same social circle. This effect is more pronounced in the center of the network, therefore individuals on the periphery

can function as bridges to other networks. In fact, Granovetter (1983), in the revisit of his seminal work on the strength of weak ties, reinforces the idea that it is weak ties that serve as network bridges and are the conduit for the novel resources available in otherwise unreachable networks. Lin (2001) proposes that Granovetter's (1983) idea that there is strength in weak ties lends support to the argument that weak ties can provide an advantage in gaining novel information and non-redundant resources, which would lead to a greater likelihood of gaining unique and valuable resources (Renzulli et al., 2000). Further, Granovetter (1983) suggests that the likelihood that the weak ties that produce access to novel resources also promote access to the structural holes proposed by Gedajovic (2013). It is access to structural holes that will benefit entrepreneurial efforts. From the perspective of the entrepreneur, structural holes, then, are an important aspect of gaining and using the resources needed for success such as borrowed funds. It is proximity to bridges within the social network that leads to a greater probability that the actor will be able to use the bridge to gain resources outside of their current network (Lin, 2001).

### **Sources of Social Capital**

The essence of social capital is in the structure of interpersonal relationships and the substance and content that those relationships create (Kim & Aldrich, 2005). Because of homophily, individuals tend to form closer relationships with those who have similar characteristics as them. This is a combination of both ascribed and achieved characteristics (Kim & Aldrich, 2005). The product of this combination, while producing strong adherence to social norms and engendering reciprocity, results in less diverse



social networks (Gedajlovic et al., 2013). Having fewer diverse contacts as part of one's social network likely hinders an individual's accumulation and effective use of certain types of social capital.

One perspective is that it is closure that creates and ensures the enforcement of effective norms and therefore, contributes to trustworthiness (Adler & Kwon, 2002). It is the concept of bridging social capital, however, that allows actors to bridge structural holes and gain access to information or resources not already available (Gedajlovic et al., 2013). From the perspective of Adler and Kwon (2002), it is closure that helps to facilitate trustworthiness, which they argue strengthens social capital. On the other hand Gedajlovic, et al. (2013) seem to point to a lack of closure, or the presence of structural holes, as essential for the creation of social capital. In fact sociologist Ronald Burt (1982) describes someone who bridges structural holes as “an entrepreneur in the literal sense of the word – a person who generates profit from being between two others” (p. 34). Structural holes, or the space between the denser regions of a network, then they provide an opportunity for the brokering of information and have value because of the informational arbitrage they can create (Walker et al., 1997). The value of structural holes is in the early stages of network formation and as the network matures the value of adherence to norms makes closure of the network and the formation of bonding ties relatively more valuable than structural holes (Adler & Kwon, 2002). Structural holes can be spanned when an actor uses a direct tie to reach indirect ties (Kim & Aldrich, 2005). Although it can be helpful to differentiate bridging and bonding in analyzing the sources and effects of social capital, the reality is that both forms often occur simultaneously (Adler & Kwon, 2002).

Another useful way to examine social capital is among three dimensions: structural, cognitive, and relational (Gedajlovic et al., 2013; Tsai & Ghoshal, 1998). The structural dimension is a necessary antecedent in this typology since it composes the ties and configuration of the relationships between actors and their shared experiences and interactions over time influence the cognitive dimension (Nahapiet & Ghoshal, 1998; Pearson et al., 2008). The cognitive dimension includes the shared values and common language of actors. The relational dimension encompasses the norms, trust, and obligations between actors in a network. Gedajlovic et al. (2013) posit a schema that tracks how antecedents lead to relationships and networks, which result in social capital and produce entrepreneurial outcomes both individually and collectively. From this perspective, they suggest that the source of social capital lies within the structural dimension and the cognitive and relational dimensions represent the resources of social capital, which follows the work of Tsai and Ghoshal (1998) and Pearson, Carr, and Shaw (2008) by positioning the structural dimension as an antecedent to the relational and cognitive dimensions. It is from the structural dimension that we can better understand structural holes and the value of weak ties because they constitute part of the structure of social capital. Research shows that the presence of structural holes and less dense networks with more weak ties benefit smaller and newer firms while the absence of structural holes and more dense networks replete with stronger ties benefit older, larger firms (Gedajlovic et al., 2013). The presence of relationally enhanced ties or bridging relationships cannot be ignored as Levin, et al. (2016) found that these ties can actually help network actors realize the potential of the new and unique resources provided

through network bridging. These findings point to a measurable phenomenon that positions social capital as an important component in the study of entrepreneurship. However, while we know that social capital is important for entrepreneurs, it is still unclear whether the benefits of social capital persist across all types of entrepreneurs. For example, research has shown that gender can influence the relationships between entrepreneurs and financial capital providers (Alsos & Ljunggren, 2017; Saporito, Elam, & Brush, 2013). As a result, the literature lacks a complete understanding of the potential moderating effect that entrepreneur characteristics, such as gender, may have on tie-strength and the presence and usefulness of structural holes.

Social capital thus constitutes a “long-lived asset into which other resources can be invested, with the expectation of a future (albeit uncertain) flow of benefits” (Adler & Kwon, 2002, p. 21). Like financial capital, it is also appropriable in the sense that an actor’s social capital can be used for various purposes and can be converted into other useful resources (Adler & Kwon, 2002). Despite these similarities to other forms of capital, social capital is inherently part of the structure of the relationships themselves rather than inherent to the actor or in the resources that it may enable (Coleman, 1988). This feature of social capital is important to entrepreneurs because it can enable access to resources outside of the skills of the entrepreneur. These connections can help entrepreneurs identify opportunities, leverage resources, and secure legitimacy (Stam et al., 2014). Social capital, in this respect, functions as a sort of entrepreneurial currency that individuals can use to secure resources that are not directly under their control (Miller et al., 2007).

Social capital can sometimes substitute for other forms of capital or can effectively complement other resources that the entrepreneur has (Adler & Kwon, 2002). An “entrepreneur’s social capital enables them to access third-party guarantees and obtain direct or indirect financing, particularly debt financing, suggesting that social capital acts as alternative assets to loan collateral” (Shao & Sun, 2021, p. 499). Social capital, therefore, not only helps with access to debt financing but to venture capital as well. In particular, structural social capital facilitates access to venture capital and cognitive social capital eases the negotiation stage with venture capitalists through knowledge exchange (Shao & Sun, 2021). Social capital is thus used to facilitate the accumulation and use of other forms of capital.

## **II. THEORETICAL FRAMEWORK**

### **Role Congruity Theory**

Role congruity theory states that women may experience prejudice, especially in leadership roles, as a result of incongruity between stereotyped perceptions of women and the attributes that are perceived to be required for success (Eagly & Karau, 2002). The homophilous nature of strong-tie networks may reinforce this incongruity and make the formation of social capital for women more difficult. Eagly and Karau (2002) further propose that gender roles are pervasive in nature and easily activated. One reason for this could be that these stereotypes have been institutionalized. Feminist theory has moved from gender being strictly an attribute of individuals to a view that institutions are structured in gendered ways (Nelson et al., 2009). The result of this may be that female entrepreneurs face prejudice when it comes to attempting to connect within these institutions.

There are two distinct forms of prejudice that women may encounter: a less than favorable assessment of women's potential and a less than favorable evaluation of their actual performance (Eagly & Karau, 2002) (see figure 3). Eagly and Karau (2002) found that women indeed did fare less well than men in leadership roles that were given particularly masculine definitions. Because these forms of prejudice impact both the assessment and evaluation of women this could be a factor in the accumulation of social capital. One of the findings of Alsos and Ljunggren (2017) is that the gendering of entrepreneurship affects the relationship between investors and entrepreneurs such that women have to signal more masculine elements to achieve legitimacy.

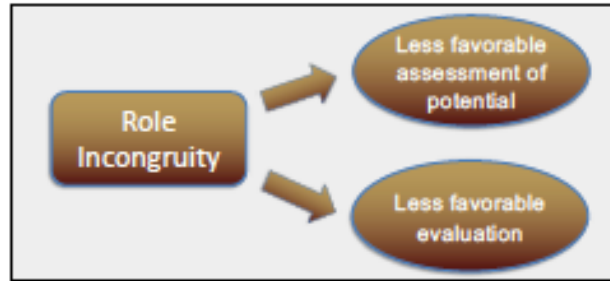


Figure 3

### **Entrepreneurial Access to Financial Capital**

Historically, entrepreneurs generally have had two ways to seek outside financing for their endeavors: venture capital, usually in the form of equity, or bank financing in the form of debt. More recently, crowdfunding has become an important source of financing, especially for smaller firms. This source of financing is attractive because, in addition to gaining access to financial capital, entrepreneurs can use the crowdfunding campaign to raise awareness about their business or product. For smaller firms, bank financing is the most predominant source of external financing, which is largely due to venture capitalists' preference for particular industries, notably technology and businesses with valuable intellectual property, as well as a desire for high growth. Venture capitalists share in the upside potential, whereas banks only earn a specified interest rate (de Bettignies & Brander, 2007). Many factors go into the choice of venture capital versus bank financing including the risk profile of the entrepreneur, the life cycle of the business, and other tangible and intangible resources the entrepreneur may possess (Shao & Sun, 2021).

Entrepreneurs are active decision-makers in the choice between bank financing and venture capital. The factors that go into the type of financing include a need for

additional technical expertise, the type of business, the size of the business as well as the perceived cost of capital. For example, a small restaurant likely wouldn't be a good candidate for venture financing, even if factors like the cost of capital or the need for technical expertise would favor venture capital. However, the presence of value-added managerial or technical expertise is a significant component of why venture financing is chosen. Absent this, bank financing is preferable due to the complex nature and loss of control that venture financing brings to the table (de Bettignies & Brander, 2007). Because venture capital is most useful when the investor can provide highly effective managerial input it is therefore important to understand how entrepreneurs gain access to investors.

Social capital is involved in the access to venture capital because venture financing involves the entrepreneur finding the investor. The actual financing decision is a complex multistage process involving both the entrepreneur and the investor. This process moves through three distinct stages: access, negotiation, and action (Shao & Sun, 2021). Understanding how social capital plays a role in the actual mobilization of outside financing is imperative.

### **Social Capital and Financing for Entrepreneurial Ventures**

Capital structure is an important decision that entrepreneurs must make at various times in the life cycle of a business. Choices between long-term debt financing and equity may be influenced by factors such as size, business stage, and future prospects for growth (Shao & Sun, 2021). Despite efforts by banks to make access to capital more equitable, gender differences still exist. In 2008, the average SBA-backed loan was

\$242,090, but SBA loans to women-owned businesses averaged far less at \$165,073 (Robichaud et al., 2019). Additionally, men used external financing 70% of the time versus 30% for women (Wilson, 2016).

Venture capital can be an important source of funding for entrepreneurial efforts, especially for high-growth firms. Often venture capital deals hinge on relationships between the investor and the entrepreneur, or at the very least are dependent on brokers to bridge gaps between the investor and the entrepreneur. Greater overlap between the networks of the entrepreneur and the investor increases the probability that the entrepreneur will receive private equity financing. Not only does this give the entrepreneur access to financial capital but one of the benefits of private equity is access to other valuable resources such as experience and knowledge (Carter et al., 2003). Shao and Sun (2021) echo the role that social capital plays in venture capital. Their study also reveals important insight into the role that the structural, cognitive, and relational dimensions of social capital play in the decision-making process of securing venture financing. One important finding is that it is not the presence of structural social capital alone that determines whether venture financing will be used, but cognitive social capital plays an important role (Shao & Sun, 2021).

Carter et al. (2003) examined network diversity and strength of relationships to test the impact of social capital on men's and women's access to financial capital. Although their study did not show that social capital had a significant impact on debt, equity, or bootstrapping financing among female entrepreneurs, they do concede that it may be because of the timing and manner in which they examined the network effect. Social capital may play a greater role in earlier stages of the process, such as connecting



entrepreneurs to investors rather than in later stages such as deal formation. One possibility is that because their focus was on structural social capital and did not include measures of cognitive social capital, an important element was missing. Shao and Sun's (2021) findings confirmed what Carter, Brush, et al. (2003) suggested; that it is the structural social capital that plays a larger role in the early stages when investors are introduced to entrepreneurs and that the cognitive social capital is instrumental in deal negotiation.

The impact of social capital on external financing, especially debt financing, can manifest itself in three ways (Wang et al., 2020). First, the duration of engagement with and the number of financial institutions that the entrepreneur interacts with has an impact on the ability to gain financing as well as the amount. Second, social capital reduces information asymmetry which increases the likelihood of receiving funding. Finally, it can also reduce the risk of default to the bank because of the reputational risk to the borrower for defaulting. This supports Granovetter's assertion that weak ties can be valuable (1973).

### **Gender Differences in Entrepreneurship**

Business ownership among females is increasing and plays an important role in the economy and society. The number of women-owned businesses in the United States grew at a rate of 21% from 2013 to 2018; far in excess of the rate of 9% for all businesses in aggregate (*The 2019 State of Women-Owned Business Report*). In 2018 the female business ownership growth rate slowed down to 0.6% but women-owned businesses still only comprise 19.9% of all firms (Hait, 2021). The distribution of female-owned firms

also varies widely in different locations across the United States (Conroy & Weiler, 2015). Access for women to vital resources, particularly funding, that impact firm performance is needed (Fairlie & Robb, 2009). Access to, and utilization of, outside financing is not equal between male and female entrepreneurs. For example, it is the owner and firm characteristics that are the major factor in bank loan decisions, and women-owned firms are often concentrated in the retail or service sectors which may be less desirable from a bank's perspective (Mijid, 2014).

Fairlie and Robb (2009) used the U.S. Census Bureau's Characteristics of Business Owner's (CBO) survey to find that compared to male-owned businesses, women-owned businesses have a higher chance of failure, underperform with regard to sales as well as hiring employees and that having smaller sales translates into lower profits. Because the CBO data are rich, they were able to determine some possible determinants of this performance gap. They also looked at three broad categories of capital (human capital, business human capital, and financial capital) and found that access to these forms of capital was lower for female business owners.

Part of the reason that female entrepreneurs typically have less financial capital is that they have fewer opportunities to build their human and intellectual capital because they are less likely to have worked in a family business which can help generate and maintain high-quality interpersonal relations (Fairlie & Robb, 2009). This might preclude women from accessing the friends and family types of capital that are frequently used by start-ups. Wilson (2016) suggests that female entrepreneurs are actually discouraged for fear of rejection from applying for more formal types of financial capital such as bank loans and that access to capital may be restricted because of actual

characteristics of the business, such as size, sector, and age of the business that are more typical of women-owned businesses. In their study "The Latent Demand for Bank Debt: Characterizing 'Discouraged Borrowers'" Freel et al, (2012) found that 24% of female-led firms compared to 14% of male-led firms reported discouragement from seeking a bank loan and that factors such as lack of self-confidence, perceptions that debt was risky, and perceptions of supply-side discrimination exist. Fairlie and Robb's (2009) empirical analysis of CBO data found that twice as many male-owned businesses than women-owned businesses had net profits of at least \$10,000. This would seem to suggest that women-owned firms are not as profitable as firms owned by men. In addition, women were over-represented in personal and professional services firms and underrepresented in construction, agriculture, and manufacturing (Fairlie & Robb, 2009). This points to the possibility that there is some underlying factor that may affect women-owned firms differently than their male counterparts. These issues seem to have exasperated females' quest for financial capital and thus have limited the success of their firms and the types of firms that they tend to start.

### **Gender Differences in Social Capital**

One particular difference between female and male entrepreneurs and social capital is the difference in the types of social connections that female entrepreneurs may form. Tie strength is an important factor when evaluating the nature and effect of social capital on entrepreneurial outcomes. Women do tend to have stronger ties and more kinship-based ties than men and this may limit female entrepreneurs' ability to create more diverse networks (Renzulli et al., 2000). In a study of entrepreneurs in two Florida

municipalities, it was proposed that there is a significant difference between male and female entrepreneurs in how bridging and bonding social capital are utilized in various types of ventures. Female entrepreneurs tend to rely more on bridging social capital in lifestyle businesses, while males use this type of social capital more in high-growth ventures (Neumeyer et al., 2019). This affects the types of businesses that male entrepreneurs tend to start versus female entrepreneurs. Not only does the type of social capital that is used by male versus female entrepreneurs matter, but the type of businesses women tend to enter versus their male counterparts is different. Fairlie and Robb's (2009) analysis of CBO data sheds light on important differences in the outcomes of these entrepreneurs. The data reveal that businesses owned by women underperform businesses owned by men in terms of sales and hires. One particular reason for these outcomes could be that women tend to concentrate in more service-oriented businesses and men in construction, agricultural, and manufacturing firms. One outcome of this is that access to debt financing may be restricted. Without the collateral that more capital-intensive firms have, service-oriented businesses may suffer from a lack of debt financing (Wilson, 2016). Mijid summarizes the net effect as:

a 'vicious cycle' of circular reasoning: they tend to start a smaller firm in one of the less profitable and less growth-oriented retail or service industries, both of which are reasons for loan denial. Once their application for a loan has been rejected, they remain discouraged from applying for a future loan; their firms stay smaller, have less cash flow, and thus, have fewer growth opportunities. (2014, p. 242)

This effect can be seen in studies that show that female entrepreneurs are more likely than their male counterparts to use personal funds or financing sources such as leasing. Leasing as a financing source is of particular interest because it is a financing source that often comes to the entrepreneur through equipment manufacturers who use a sales strategy rather than being sought out by the entrepreneur (Carter et al., 2003). Yetim (2008), in her study of female entrepreneurs in Turkey, found that women make greater use of their social connections to generate social capital, however, these connections are the result of strong versus weak ties. These relationships, while built on strong trust, do not generate the weak ties that lead to diverse networks. Due to this overrepresentation of strong ties, the networks that women create are different than those of men. This results in fewer formal agents and information sources such as bankers and professional advisors (Yetim, 2008).

The capital structure of a business can play an important role in the ultimate success of the business and is frequently determined by access to various forms of financial capital. It is clear that social capital can benefit entrepreneurs, especially in gaining other valuable resources such as financial capital.

*Hypothesis 1: There is a positive relationship between an entrepreneur's level of social capital and the ability to borrow funds.*

Given the differences in how males and females gain and use social capital, gender will play a significant role in an entrepreneur's access to outside financial capital. An entrepreneur's ability to generate external financial capital relies on making connections with sources of that capital and women tend to have more kinship-related ties than men which results in higher levels of homophily and should result in less

valuable connections in terms of accessing financial capital (Renzulli et al., 2000). Two primary sources, outside of family, are equity investors and bank debt. Because social capital can indicate the number and quality of these connections, as entrepreneurs' social capital increases their ability to source and secure financial capital should increase as well.

*Hypothesis 2: Male entrepreneurs receive more external funding through debt sources than female entrepreneurs.*

Because weak ties represent more diverse networks and therefore contain bridging connections to resources outside of the entrepreneur's own connections, weak ties should result in greater access to and utilization of financial capital. Males tend to have more weak ties and therefore more social capital than females, and this positively impacts their ability to attract outside financial investment (Renzulli et al., 2000).

*Hypothesis 3: The relationship between an entrepreneur's social capital and borrowed funds is stronger for males than for females.*

The findings of Eagly and Karau (2002) along with Alsos and Ljunggren (2017) indicate that gendered institutions may introduce prejudice when women attempt to engage with historically male organizations. If there is a difference in the amount of social capital that female entrepreneurs have versus their male counterparts, then one would expect gender to play a moderating role in the relationship between social capital and the ability to borrow funds.

### **III. METHODS**

#### **Participants**

Participants were solicited from the database of clients at the Texas State University Small Business Development Center's (SBDC) database. The Texas State SBDC covers a twelve-county region in central Texas including Bastrop, Blanco, Burnet, Caldwell, Fayette, Hays, Lampasas, Lee, Llano, San Saba, Travis, and Williamson counties. The database included 11,000 small business clients with contact information, including email addresses, available. This database includes both employer and non-employer firms and includes clients that the Texas State University SBDC has advised over the past 10 years. The Small Business Administration Office of Advocacy classifies a small business as a business with fewer than 500 employees. All SBDC clients are classified as active or inactive based on whether or not a client has had contact with the SBDC in the last fiscal year, which runs from October to September. These clients are further classified as long-term or short-term based on the number of hours spent in direct consultation with a business advisor at the SBDC. Long-term clients have had at least five hours of consultation time within a given fiscal year. Survey participants were chosen by selecting all clients who had received advice from the SBDC within the past five years. This resulted in a list of potential respondents that included 1,878 individual businesses. In order to avoid any perceptions of coercion, clients of the author were not invited to participate. A questionnaire containing the questions and scales listed in the appendices was created using Qualtrics. Potential participants were sent the questionnaire link via email and were promised that aggregate results would be shared

once the research was complete. Two follow-up emails were sent to remind respondents that had not participated requesting them to complete the questionnaire. The complete survey is included as Appendices A-C.

From the initial sample, 140 emails bounced and 6 respondents requested to be removed from any other email contact. 159 respondents started the survey, however, only 79 surveys were completed resulting in responses from 40 male entrepreneurs (51.3% of the sample) and 38 female entrepreneurs (48.7% of the sample) with 1 participant electing to not answer. Businesses were represented from across multiple industries and businesses ranged in age from 0 years to 122.17. Respondents were not questioned about whether they were founders of the firm but many are likely founders and current owners. The mean age of the businesses was 9.13 years. The mean revenue was \$528,626 and the mean profits were \$67,636.

Control variables for the study were the age of the owner, education level, and race. The age of the business owners ranged from 23 to 81 with the mean being 50.10. Distributions of the education level of the owners can be seen in table 1 below. The majority of respondents had a bachelor's degree and 68.9% had a bachelor's degree or higher. Self-reported racial or ethnic group membership can be seen in table 2 below.



Table 1

Highest Education			
	Frequency	Percent	Cumulative Percent
Some high school	2	2.6	2.6
High school diploma or GED	1	1.3	3.9
Some college	14	18.2	22.1
Associate's degree	7	9.1	31.2
Bachelor's degree	31	40.3	71.4
Master's degree	19	24.7	96.1
Doctoral degree	3	3.9	100.0
Total	77	100.0	
Did not respond	2		
Total	79	100.0	

Table 2

Race/Ethnicity		
	Frequency	Percent
White	50	63.3
Black	8	10.1
Hispanic	13	16.5
Asian	2	2.5
Native American	1	1.3
Other	3	3.8
Chose not to answer	2	2.5
Total	79	100.0

## Measures/Data Gathering

In order to measure social capital, the Resource Generator was used (see Appendix A). The Resource Generator is a scale designed to measure the general social capital of a general population (Van Der Gaag & Snijders, 2005). Because it is designed to measure the distribution of social capital in a given population, its productivity, and which parts of social capital are responsible for certain effects it is an ideal tool to measure the social capital of business owners and determine if gender plays a moderating role in the acquisition of financial capital. Van De Gaag and Snijders (2005) developed the Resource Generator combining previous measures of social capital, the Name Generator, and the Position Generator, to produce a fixed list of resources that cover several life domains that may be instrumental in achieving goal attainment. The Resource Generator in effect measures bridging and bonding social capital through the three domains of expert advice, personal support, and problem-solving (Foster & Maas, 2016). Foster and Maas conducted an exploratory factor analysis to determine the reliability of this scale and determined that it supports the three factors of expert advice, personal support, and problem-solving.

Foster and Maas' (2016) factor analysis of the Resource Generator provides empirical evidence that it can be used with moderate confidence ( $\alpha=0.84$ ). The first ten items in the Resource Generator measure the first factor: bonding social capital. The next seven items effectively measure bridging social capital. The final four items measure linking social capital. Calculating the scores for each factor produced a measure of tie strength for bonding, bridging, and linking social capital.

Measuring social capital through the Resource Generator and then linking it to outcomes related to financial capital, namely an owner's own capital, borrowed funds, and funds from outside investors to show how social capital is mobilized for business owners is important because it provides evidence that the social capital being measured is indeed capital and is producing a return (Cook, 2017). Financial capital was measured by asking respondents to classify capital infusions into their business into three categories of the owner's own funds, borrowed funds, and funds invested by outsiders.

The survey was sent to these SBDC clients via email in January of 2022. Data from the survey, which includes the Resource Generator, along with other demographic questions and questions related to amounts and types of financial capital, was linked back to data previously collected by the Texas State University SBDC. This data included amounts of capital infusions into the business as a result of efforts by SBDC business advisors.

The self-report inventory for social capital uses the Resource Generator (Van Der Gaag & Snijders, 2005) and relies on respondents' indication of knowing a person who could provide social capital in various situations. The respondents were then asked to indicate the degree of the relationship, either an acquaintance, friend or family member for items where they indicated a relationship existed. A score for total social capital was derived by adding the number of connections that each respondent had for each item. Scores could range from a low of 0 to a high of 75.

External financial capital was self-reported. Respondents were asked to quantify financial investment from the owner, financial investment from external sources, and borrowed funds. Owner-provided funds ranged from a low of \$0 to a high of \$1,100,000

and a mean of \$95, 197.83. Investments from outsiders ranged from \$0 to \$4,320,000 with a mean of \$86,079.39. Borrowed funds ranged from a low of \$0 and a high of \$20,000,000 with a mean of \$158,124.95. See table 3 below for details on means by gender.

Table 3

Types of Financing by Gender				
		Owner infusion	Borrowed funds	Outside Investment
Female	<i>Mean</i>	\$63,778.66	\$70,745.48	\$8,898.68
	<i>N</i>	38	38	38
	<i>Std. Deviation</i>	\$192,814.83	\$160,161.79	\$20,209.00
Male	<i>Mean</i>	\$126,175.98	\$244,838.58	\$161,353.05
	<i>N</i>	40	40	40
	<i>Std. Deviation</i>	\$239,906.92	\$451,484.05	\$704,067.71
Total	<i>Mean</i>	\$95,777.28	\$160,023.99	\$87,080.41
	<i>N</i>	78	78	78
	<i>Std. Deviation</i>	\$219,091.97	\$351,054.41	\$507,102.55

### III. RESULTS

#### Variables

A score for total social capital was computed by assigning a value of one to each item where respondents indicated they knew an acquaintance, friend or family member who matched each question and adding these values together. Total social capital scores could range from a low of 0 to 75. The sample population had total social capital scores ranging from 4 to 66 with a mean of 25.66. Means by gender are reported in table 4.

Table 4

Means of Total Social Capital by Gender

Gender	Mean	N	Std. Deviation
Female	22.61	38.00	11.11
Male	28.75	40.00	13.61
Total	25.76	78.00	12.76

The independent variables, total social capital, and age of owner were mean-centered to reduce issues with collinearity. Gender responses were recoded so that males equal one and females equal zero. Race was also recoded using white as the base variable. Finally, an interaction term was computed with the product of gender and total social capital, one for unweighted social capital and one for weighted social capital.

Regressions were run to test hypothesis 1 and hypothesis 2 using age of the owner, highest education and total social capital as control variables. For hypothesis 1

the total social capital score was used as the independent variable. For hypothesis 2 gender was used as the independent variable.

In order to determine the moderating effect of gender on social capital, an interaction term was computed using gender and total social capital. Hierarchical regression was run using the age of the owner, highest education, and race as control variables, and then total social capital was added, in the final stage gender and the interaction term were added.

Correlations were computed for all measured variables. Gender and borrowed funds were significantly correlated at the 95% confidence interval ( $p = 0.028$ ), total social capital and borrowed funds were significantly correlated at the 95 % confidence interval ( $p = 0.017$ ), and gender and social capital were correlated at the 95% confidence interval ( $p = 0.033$ ). See Table 5 for these results.

Table 5

Correlations of Variables				
		Gender	Borrowed funds	Total Social Capital
Gender	<i>Pearson Correlation</i>	1	0.249*	0.242*
	<i>Sig. (2-tailed)</i>		0.028	0.033
	<i>N</i>	78	78	78
Borrowed funds	<i>Pearson Correlation</i>	0.249*	1	0.268*
	<i>Sig. (2-tailed)</i>	0.028		0.017
	<i>N</i>	78	79	79
Total Social Capital	<i>Pearson Correlation</i>	0.242*	0.268*	1

<i>Sig. (2-tailed)</i>	0.033	0.017	
<i>N</i>	78	79	79

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

## Regressions

### Hypothesis 1:

Hypothesis 1 states that there is a positive relationship between an entrepreneur's level of social capital and ability to borrow funds. Table 6 shows the regression results from hypothesis 1. Results show that social capital has a positive effect on borrowed funds and that the relationship is significant ( $p=0.021$ ) at the 95% confidence interval. This suggests that social capital plays a role in the ability of an entrepreneur to secure borrowed funds. This supports the findings of Wang, et al. (2020) that social capital can play a role in the ability to access external funding.

Table 6

Hypothesis 1 Regression <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients		<i>Sig.</i>
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>	
(Constant)	-32867.870	178636.800		-0.184	0.855
Highest Education	3670.647	31350.289	0.014	0.117	0.907
Black	-179755.703	134788.121	-0.156	-1.334	0.187
Hispanic	-29482.881	110434.868	-0.031	-0.267	0.790
Asian	189556.829	255493.787	0.086	0.742	0.461

Native American	-243957.066	357078.062	-0.079	-0.683	0.497
Other Race	-125968.256	210288.882	-0.069	-0.599	0.551
Age	-84.044	3576.555	-0.003	-0.023	0.981
Total Social Capital	7811.847	3313.860	0.282	2.357	0.021

a. Dependent Variable: Borrowed funds

(\*\*\*:  $p < 0.01$ , \*\*:  $p < 0.05$ , \*:  $p < 0.1$ )

## Hypothesis 2:

Hypothesis 2 states that male entrepreneurs receive more external funding through debt sources than female entrepreneurs. Table 7 shows the results of regression analysis on hypothesis 2. The results show that there is a positive relationship between male owned businesses and the ability to obtain borrowed funds. This relationship is significant ( $p=0.021$ ) at the 95% confidence interval. This may be an indication of the discouragement of female borrowers from applying for business loans (Freel et al., 2012). These results also explain the fact that SBA loans are 31.8% lower for women-owned firms than men and that men are more than twice as likely to borrow funds for their businesses than women (Fairlie & Robb, 2009).



Table 7

Hypothesis 2 Regression <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	21501.939	174471.810		0.123	0.902
Highest Education	13317.540	32246.482	0.049	0.413	0.681
Black	-157026.662	135535.658	-0.137	-1.159	0.251
Hispanic	-65424.601	112529.798	-0.070	-0.581	0.563
Asian	164124.687	256924.108	0.074	0.639	0.525
Native American	-117773.266	360585.539	-0.038	-0.327	0.745
Other Race	-38911.108	215678.132	-0.021	-0.180	0.857
Age	-3664.646	3583.649	-0.121	-1.023	0.310
Gender	205796.355	86959.904	0.292	2.367	0.021

a. Dependent Variable: Borrowed funds

(\*\*\*:  $p < 0.01$ , \*\*:  $p < 0.05$ , \*:  $p < 0.1$ )

### Hypothesis 3:

Hypothesis 3 states that the relationship between an entrepreneur's social capital and borrowed funds is stronger for males than for females. Hierarchical regression was run to test hypothesis 3 that gender plays a moderating role on the effect of social capital on borrowed funds. The results in table 8 show the results of the hierarchical regression. The results show that hypothesis 3 could not be supported as the moderating variable ( $p=0.303$ ) was not significant at the 95% confidence level.

Table 8

Hypothesis 3 Regression<sup>a</sup>

		Unstandardized Coefficients		Standardized Coefficients	
Model		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>
1	(Constant)	175745.788	167226.075		1.051
	Highest Education	2451.944	32980.009	0.009	0.074
	Black	-160707.823	140036.329	-0.140	-1.148
	Hispanic	-27231.849	115072.213	-0.029	-0.237
	Asian	151669.744	265417.452	0.069	0.571
	Native American	-205027.253	370631.111	-0.066	-0.553
	Other Race	-138696.251	218554.576	-0.077	-0.635
	Age	-2101.450	3639.450	-0.070	-0.577
2	(Constant)	99594.869	165264.921		0.603
	Highest Education	2100.532	31952.077	0.008	0.066
	Black	-182617.617	135994.514	-0.159	-1.343
	Hispanic	-32183.228	111504.550	-0.034	-0.289
	Asian	185371.445	257547.097	0.084	0.720
	Native American	-244286.711	359468.957	-0.079	-0.680
	Other Race	-127956.002	211790.244	-0.071	-0.604
	Age	105.600	3650.579	0.003	0.029
	Total Social Capital	7788.081	3336.890	0.281	2.334
3	(Constant)	15852.966	172901.781		0.092
	Highest Education	15712.916	32311.292	0.057	0.486
	Black	-223410.740	142378.195	-0.194	-1.569
	Hispanic	-75702.756	112260.736	-0.081	-0.674

Asian	172588.652	254308.209	0.078	0.679	0.500
Native American	-127462.967	359563.340	-0.041	-0.354	0.724
Other Race	-61232.031	213243.436	-0.034	-0.287	0.775
Age	-1380.826	3756.665	-0.046	-0.368	0.714
Total Social Capital	1260.718	5559.951	0.045	0.227	0.821
Gender	84254.423	113398.375	0.119	0.743	0.460
Moderating Variable	7553.047	7278.228	0.251	1.038	0.303

---

a. Dependent Variable: Borrowed funds

## **V. DISCUSSION**

This thesis set out to answer the question on the impact of social capital on borrowed funds, as well as the role that gender plays in influencing this relation. Of the three hypotheses developed only two were found to be supported: That social capital has an impact on the amount of borrowed funds that entrepreneurs access and that gender has an impact on the amount of borrowed funds that entrepreneurs access. For hypothesis 1 it was expected that higher levels of social capital would result in higher amounts of borrowed funds and for hypothesis 2 it was expected that gender would also have an impact on borrowed funds, more precisely that males would have access to and receive higher levels of debt funding. While these two hypotheses were shown to be statistically significant it was surprising that gender did not appear to have a moderating effect on the way that social capital impacts funding. The literature reveals differences in bonding and bridging capital between male and female entrepreneurs that can impact access to various important resources, including financial capital (Neumeyer et al., 2019; Renzulli et al., 2000).

The increase of entrepreneurship among females and laws and the reduction of more explicit forms of discrimination may be leveling the playing field, however, the fact that there was a significant effect on the amount of borrowed funds between men and women points to evidence that there still may be work for practitioners who hope to help entrepreneurs can do to eliminate barriers.

## **Implications**

Networks are integral to the development of entrepreneurial ecosystems (Scott et al., 2022). Research that helps further the understanding of these networks and means to strengthen them is beneficial to all entrepreneurs, even those that may not face the same barriers as females. One key to this may be developing governance functions within the networks that foster a greater sense of trust among actors. Greater levels of trust between non-homophilous groups, where trust is more difficult to establish due to differences among actors, could speed up the diffusion of resources throughout entrepreneurial ecosystems and therefore create more economic growth.

This research is valuable for the body of literature on entrepreneurship because it sheds light on potential barriers for female business owners. The acquisition and use of financial capital is often one of the important resources that help with the start-up, survival, and success of businesses and in capital-intensive businesses is often required. Understanding factors which may influence, positively and negatively, this access is important in its own right. Organizations like the SBDC and SBA, along with other private and public organizations that are charged with promoting the success of entrepreneurial enterprises can use this understanding to better craft policy, tools, and initiatives that can help eliminate these barriers.

Small business incubators have become an important means to support the creation of start-ups and discovering ways in which to ensure that women are well represented, not just within the participants of these incubators, but within the potential resources (investors, subject matter experts, bankers, etc.) that these incubators can provide to entrepreneurs.

Specifically, within the SBDC program, creating ways for female owners to build social capital. Educating advisors within the SBDC on the importance of social capital along with creating specific programs that help entrepreneurs build their networks could help these clients build more successful small businesses. As crowd-funding and angel investing grow and become viable sources of financing for small businesses, building a better understanding of factors that may influence success in obtaining this type of financing would add value to the services that SBDCs offer to the local business community.

### **Limitations**

One of the primary limitations of this study was the size of the sample. Utilizing a small sample size created issues with data analysis. Gathering more data, and from a variety of other sources, would be valuable in building a better understanding of the role that social capital and how gender may influence it has on entrepreneurs' access to financial capital. As evidenced by the large percentage of respondents who failed to complete the survey, some survey fatigue may have been a cause of the small sample size.

Related to the sample size was the population from which the sample was derived. SBDC clients are frequently seeking out assistance and the SBDC serves any clients that seek assistance. The nature of this relationship results in SBDC advisors connecting entrepreneurs with resources, including access to financial capital, regardless of the pre-existing social capital of the entrepreneur.

In addition, the study did not utilize measures of types of ties. A better understanding of how bonding, bridging, and linking may play a role in the type of

financing received as well as success in obtaining that financing would be valuable. Other measures of social capital may provide more insight into this.

### **Future Research**

Exploring the relationship between gender and social capital in populations other than SBDC clients could provide valuable insight into how entrepreneurs access financial capital. As mentioned, this study used a small sample size and so attempting to explore the moderating effect of gender on social capital using a larger sample could provide additional information.

Measurement instruments that specifically measure social capital in entrepreneurs could also be developed that would give researchers additional tools to study the role that social capital plays in entrepreneurship. Future research could focus on the development of additional instruments that could measure social capital.

From a qualitative standpoint, future research could be focused on the types of signals that female entrepreneurs use in dealing with highly gendered institutions. Examining the types of signals that female entrepreneurs who are successful in obtaining financing must use to be successful in addition to the type of signals that decision makers rely on to make financing decisions could be useful in better understanding factors that may play a role in determining if entrepreneurs receive financing.

## APPENDIX SECTION

### Appendix A

#### Thesis Survey Questions

1. Name

Text

2. Business Name

Text

3. Do you know anyone who:

		If yes, access through		
	Yes/No	Acquaintance	Friend	Family member
Knows how to fix a car				
Gives advice on using a personal computer				
Is an elected official				
Works at city hall				
Can sometimes employ people				
Knows a lot about government regulations				
Has good contacts at				



TV/radio/newspaper				
Gives advice about money problems				
Gives advice on problems at work				
Helps dispose of bulky items				
Helps with small household jobs				
Does your shopping if you are ill				
Provide care for a serious health condition				
Lend a large sum of money				
Lend a small sum of money				
Give career advice				
Provide a place to stay for a week				
Discuss politics				
Give sound legal advice				
Give a good job reference				

Can babysit other's children				
Help find someplace to live				
Watch home or pets while away				
Be there to talk about the day				
Owns a car				

1. What is your age?

\_\_\_\_\_ (constrain from 18 to 100)

2. Biological sex

a. Male

b. Female

c. I'd rather not say

3. How long have you been in business?

\_\_\_ years \_\_\_ months

4. What was your company revenue in the last fiscal year?

\$ \_\_\_\_\_

5. What was your company profit in the last fiscal year?

\$ \_\_\_\_\_

6. Number of employees (other than self)

\_\_\_\_\_

7. How much money has been invested in your company by others?

\$ \_\_\_\_\_

8. Approximately how much of this was borrowed funds, in your best estimate?

\_\_\_\_\_ %

9. How much money have you alone invested in your company?

\$ \_\_\_\_\_

10. Approximately how much of this was borrowed funds, in your best estimate?

\_\_\_\_\_ %

## Appendix B

### Demographic Questions

---

1. What is your biological sex? *Male* or *Female* or *Choose not to answer*
2. What is your age? \_\_\_\_\_
3. What is your highest level of educational achievement?  
*1. Some high school, 2. High school diploma or GED, 3. Some college, 4. Associate's degree from college, 5. Bachelor's degree, 6. Master's degree, 7. Doctoral degree*
4. What is your race or ethnicity? *White* or *Black* or *Hispanic* or *Asian* or *American Indian* or *Other*
5. How much full-time work experience for others do you have not counting your time as a business owner? years = \_\_\_\_\_ , months= \_\_\_\_\_
6. How much part-time work experience for others do you have not counting your time as a business owner? years = \_\_\_\_\_ , months= \_\_\_\_\_
7. Are you currently employed outside of your role as a business owner?  
\_\_\_\_\_
8. If you are employed in an outside role, how long have you been working for your current employer?  
years = \_\_\_\_\_ , months= \_\_\_\_\_
9. If employed in this outside role, is your current job full-time or part-time?  
\_\_\_\_\_
10. If you are employed, are you currently a manager or supervisor of other

workers? \_\_\_\_\_

11. If you are a manager, how many workers do you directly supervise?

\_\_\_\_\_

---

## Appendix C

### Financial Capital Questions

How long has your company been in business?

☐ Years (1) \_\_\_\_\_

☐ Months (2) \_\_\_\_\_

How many employees do you have (other than yourself)?

---

In the past fiscal YEAR, what is your best estimate of your company REVENUE?

---

In the past fiscal YEAR, what is your best estimate of your company PROFIT?

---

What is your best estimate of how much money has been...

INVESTED in your company by OTHERS including friends, family, strangers, etc.?

---

INVESTED in your business by YOU alone?

---

BORROWED for your company by YOU and/or the company?

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