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Examining the Influence of Social Capital on the Business Performance of Women Entrepreneurs: Evidence from Malawi

Kenneth Gondwe[1], Benson Munyenyembe[2*], and Happy Kayuni[3]
[1,3]University of Malawi
[2]Malawi School of Government
Corresponding Author*: bmunyenyembe@msg.ac.mw

Abstract

The study examines the influence of social capital on business performance in businesses run by women entrepreneurs. The study focuses on social capital-related factors, namely: (1) heterogeneity (diversity), (2) multiplexity, (3) communication frequency, and (4) emotional closeness. In this regard, a cross-sectional study design was adopted. A survey was conducted with 384 businesswomen to test the impact of social capital on female-run businesses. Data was analyzed using regression analysis. The results show that social capital has a significant positive impact on the business performance of women. The study findings indicate that heterogeneity (B=0.137, p<0.05), multiplexity (B=0.185, p<0.05), communication frequency (B=0.188, p<0.05), and emotional closeness (B=0.2, p<0.05) all have a significant positive impact. The study results offer a new, refined theoretical perspective on how social capital significantly impacts the business performance of women entrepreneurs.

Keywords: Heterogeneity, Multiplexity, Communication Frequency, Emotional Closeness, Business Performance, Women Entrepreneurs.

INTRODUCTION

Malawi has a longstanding history of implementing policy programs aimed at empowering its economy, dating back to the early 1960s. Initially, the ministry responsible for Gender, Youth, Community Services, and Social Welfare (now renamed the Ministry of Gender, Community Development, and Social Welfare) operated a Home Economics Program. This program provided training for women in various skills such as needlecraft, childcare, and nutrition. However, during that period, the prevailing belief was that Malawi's economic progress relied primarily on fostering large-scale entrepreneurship (Malawi National Economic Empowerment Policy and Action Program, 2004).

Women are commonly regarded as one of the most vulnerable groups in society, a reality that is particularly evident in least-developed, low-income countries such as Malawi. In light of this perspective, the Ministry of Gender, Community Development, and Social Welfare, guided by the Malawi National Gender Policy framework, has been actively implementing government intervention strategies. These strategies aim to safeguard the well-being of vulnerable groups, including

women, children, and the elderly, by emphasizing the "promotion of capacity building in entrepreneurship" (Malawi National Gender Policy, 2015). These policies are designed to encourage women's participation in entrepreneurship to bridge the gender and economic gaps between male and female entrepreneurs. For instance, the inception of Malawi's National Planning Commission, conceived under the patronage of Malawi 2063 (MW2063), is dedicated to fostering inclusive wealth creation and achieving national self-reliance by the year 2063. One of its enabling pillars involves fostering investments and nurturing entrepreneurship, with a focus on advancing investment and entrepreneurial actions to realize inclusive prosperity and self-reliance as envisioned in MW2063.

Several studies have demonstrated the importance of social capital embedded in an entrepreneur's network for optimizing business performance (Agyapong et al., 2017). However, this concept has not been fully developed or conceptualized (Stam et al., 2014). Limited research has explored the relationship between social capital and the performance of businesses owned by women entrepreneurs, highlighting a research gap in this area. Therefore, this study aims to address this gap by investigating the connection between social capital and the performance of businesses owned by women entrepreneurs.

Despite the significant global growth of women entrepreneurs, which has garnered considerable research attention in recent decades, the performance of women entrepreneurs in business has remained largely unsatisfactory and continues to deteriorate compared to their male counterparts (Henry et al., 2016). The underperformance or decline of women entrepreneurs in business is attributed to various factors, including insufficient networking, which hinders business awareness, as well as limited access to market information and business opportunities (Manalova et al., 2007, 2008; Hossain et al., 2009).

Researchers have argued that the poor performance of businesses operated by women entrepreneurs can also be attributed to their lack of expertise in sound financial management (Moore & Buttner, 1997; Fielden et al., 2003; Carter, 2002). Additionally, Hisrich and Brush (1984) highlighted that a scarcity of capital and its unavailability result in challenges such as the inability to remunerate staff, poor credit histories, and delayed product deliveries. These issues ultimately lead to substandard business performance among female entrepreneurs (Moore & Buttner, 1997; Fielden et al., 2003; Carter, 2002).

Many researchers have made significant contributions to understanding the performance of women entrepreneurs in business. However, it appears that there is a gap, as business owners in the informal sector fail to fully utilize the wealth of social capital available to them for enhancing business performance and growth (Agyapong et al., 2017). Despite research demonstrating the crucial role of social capital

embedded in an entrepreneur's network for effective business performance (Stam et al., 2014), this potential remains largely untapped.

Casson (1982, 2003) defines an entrepreneur as a person who identifies a business opportunity, takes the initiative to organize and manage resources, and assumes the risks involved in starting and running a business or enterprise in order to make a profit or achieve a goal. In recent decades, the rise of women entrepreneurship has attracted significant research interest (Henry et al., 2016). Entrepreneurship serves as a key driver of women's economic empowerment, independence, and self-reliance. It not only promotes gender equality but also creates positive ripple effects on family welfare, poverty alleviation, job creation, and sustainable economic development—particularly through engagement in social capital activities and commerce.

Women entrepreneurs actively participate in various trade and networking platforms at global, regional, national, district, and community levels. These platforms provide them with valuable knowledge, expertise, and networking opportunities, including access to social capital, coaching, and mentorship programs. Such engagements help women entrepreneurs secure financial resources such as grants, seed capital, group savings, and bank loans, ultimately enhancing their business performance.

Social capital, in particular, plays a crucial role in entrepreneurial success. It encompasses the social networks through which entrepreneurs acquire both tangible and intangible resources essential for business growth (Dai et al., 2015). Both male and female entrepreneurs leverage their personal networks and social connections to access key resources, identify business opportunities (Bhagavatula et al., 2010), and mobilize human and financial capital (Batjargal, 2003).

In this regard, this research explores the impact of social capital on the business performance of women entrepreneurs, providing insights from the low-income country of Malawi. The primary research question guiding this study is: *"Does social capital impact the business performance of women entrepreneurs?"* To address this question, four specific sub-questions are explored: (1) Does the diversity of women entrepreneurs' networks impact business performance? (2) Does the multiplexity of women entrepreneurs' networks impact business performance? (3) Does communication frequency in women entrepreneurs' networks impact business performance? (4) Does emotional closeness in women entrepreneurs' networks impact business performance?

The structure of this study organised as follows: Section 2 presents a literature review and hypothesis development, discussing global issues in women's entrepreneurship in low-income countries, the business performance among women in these economies, entrepreneurial activities in Malawi, the conceptual framework, and the application of social capital theory. Section 3 outlines the methodology, explaining the study design, target population, sampling technique, and data analysis methods. Finally, section 4 presents the findings of the study, followed by a discussion of their practical implications.

LITERATURE REVIEW AND RESEARCH HYPOTHESIS

Women's Entrepreneurship in Low-Income Countries

The engagement of women in entrepreneurial endeavors has witnessed a significant rise in low-income countries (UN, 2007). Despite this global trend, women entrepreneurs typically manage fewer businesses compared to men, often choosing sectors with slower growth rates and lower profitability, increasing the likelihood of closure (Loscocco and Bird, 2012). Statistics from the General Entrepreneurship Monitor (GEM, 2014) reveal that only two countries, Ghana and Thailand, have more women than men actively involved in entrepreneurship. In many developing and least developed countries like Malawi, women often engage in business out of necessity, seeking to generate income for their families due to limited job opportunities compared to men (GEM, 2011). The growth in female entrepreneurship has garnered significant attention from the academic community, evolving into a recognized research field since the 1980s (Tulus, 2009). Economic and social implications have spurred academic interest, recognizing entrepreneurship as a crucial source of employment, income generation, poverty alleviation, regional development, and innovation. Women represent a vital and untapped resource for countries striving for economic advancement (UNDP, 2011). Traditionally, many Asian societies have been patriarchal, relegating women to secondary roles. Achieving gender equality is seen as essential for both economic and human development, offering societies better prospects for progress (Shaw, 2006). Encouraging more women to participate in entrepreneurial activities holds the potential for economic prosperity and improved living standards (Ranasingha, 2009).

Chirwa (2008) outlines two primary approaches for enhancing women's productive roles in the economy: The Women in Development (WID) and Gender in Development (GAD) approaches. The WID approach acknowledges women as active contributors to development, emphasizing their access to credit, employment, and integration into entrepreneurship activities. In contrast, the GAD approach contextualizes women's roles within broader gender relations, aiming to address systemic gender inequalities by focusing on measures that facilitate women's access to productive resources and business opportunities (Moser, 1993). The prevailing argument in literature suggests that women have historically faced marginalization in society, with motherhood often defining their primary role (Moser, 1989). This marginalization manifests in unequal opportunities in economic activities and limited access to productive resources. Despite women's significant contributions to household food security and survival, patriarchal structures hinder their access to property and decision-making power (Jiggins, 1989; Joekes, 1999). In various African societies, including Malawi, women contribute significantly to family labour, particularly in agricultural activities, albeit with variations across countries (Boserup,

1986). In countries like India, women play substantial roles in food production, processing, and preservation, although their participation in non-farm activities historically remained limited but is gradually changing due to shifts in cultural and economic dynamics (Chen, 1989). In West Africa, women were active in trading cash and food crops, crafts, and commerce, as noted by Gaidzanwa (1993). Conversely, in East and Southern Africa, women were predominantly restricted to the peasant agriculture sector.

Women Business Performance in Low-Income Countries

The potential for substantial enhancement in the business performance of women entrepreneurs lies within their social capital networks, particularly through active engagement in business associations, forums, and trade activities. Business associations serve as intermediaries between business sectors and governmental systems, providing services such as representation, rulemaking, and information sharing to their members (Costa et al., 2017). Participation in these networks offers tangible and intangible benefits, including access to goods, shared assets, and indications of trustworthiness and creditworthiness (Chirwa, 2008). These associations offer various services such as government lobbying, information dissemination, technical support, event organization, training, legal aid, and business certification (Bennett and Ramsden, 2007; Plaza et al., 2014). Networking within these platforms fosters collaboration among members, facilitating collective action to advance their interests and expand their networks within both public and private sectors (Bennett and Ramsden, 2007). For start-up entrepreneurs, joining business associations or trade forums provides a valuable social network that enhances small-scale business performance by granting access to knowledge and resources crucial for financial success (Watson, 2012). Given that access to finance, information, and connections is often limited for women entrepreneurs due to gender norms and institutional barriers, these networking opportunities become especially critical for them (Bennett and Ramsden, 2007). However, despite the benefits, women face challenges in accessing leadership positions within these networks, as men typically dominate such groups and may intentionally exclude women, perpetuating gendered hierarchies within organizations (Plaza et al., 2014). These gendered barriers are deeply ingrained in societal and organizational cultures and structures, shaping expectations and behaviors of both men and women (Bastian and Zali, 2016). Despite the significance of social capital networks, there has been limited research on their impact on business performance for women entrepreneurs and their gendered effects (Plaza et al., 2014).

Women's Entrepreneurship Activities in Malawi

Micro, small, and medium enterprises (MSMEs) play a crucial role in developing countries like Malawi by creating employment opportunities and improving the livelihoods of women. Recognizing this, governments have prioritized the stimulation of entrepreneurship on their policy agendas (Ndala, 2019). A fundamental question

that dominates entrepreneurship research and policy discussions is: *Why do only some individuals recognize new business opportunities, and why do only a few take action to exploit these opportunities by engaging in entrepreneurship?* (Thu & Hieu, 2017). Malawi is not a developed country, and a significant portion of its population survives on less than a dollar a day. Mkandawire and Duan (2016) observe that Malawi is a poverty-stricken nation, where many households struggle to meet their basic daily needs. Poverty is closely linked to a lack of adequate income, employment opportunities, an entrepreneurial mindset, and access to credit. According to the Food and Agriculture Organization of the United Nations (2015), sub-Saharan Africa—including Malawi—continues to have the highest proportion of people living on less than $1.25 per day.

In response, the Malawian government has made efforts to foster an entrepreneurial mindset among its citizens by restructuring and revitalizing public organizations dedicated to entrepreneurship development. Institutions such as the Technical Education, Vocational and Entrepreneurial Training Authority (TEVETA), the Small and Medium Enterprise Development Institute (SMEDI), and the Malawi Rural Development and Enterprise Fund (MARDEF) have been instrumental in supporting entrepreneurship. These initiatives have led to an increase in women-led businesses participating in vocational training and business support programs, equipping them with valuable skills and improving their access to credit lines to expand their enterprises.

Theoretical Basis: Social Capital Theory

Adler et al. (2002) define social capital as the goodwill available to individuals or groups, originating from the structure and content of their social relationships. Its effects stem from the information, influence, and solidarity it provides to individuals. Various scholars, including Buy and Bow (2002), Newton (1997), and Slangen, Van Kooten, and Suchanek (2003), acknowledge that social capital theory comprises both individual and aggregate components. This is because individuals have varying degrees of influence over different aspects of social capital (Claridge, 2018). While an individual can actively invest in personal relationships to enhance their social capital by attending networking events, joining community or interest groups, or volunteering in their community, other aspects are beyond their control. These activities enable individuals to meet new people, form connections, offer assistance, and foster trust and reciprocity, ultimately contributing to the development of goodwill and positive relationships. Spending time with network connections and sharing experiences and perspectives further enhances aspects of social capital such as networks, trust, reciprocity, and shared understanding across all dimensions of social capital—structural, relational, and cognitive (Claridge, 2018).

Several studies have highlighted the noticeable disparity between male and female participation in entrepreneurial activities (Kelly et al., 2011; Gupta et al., 2014;

Saridakis et al., 2014; Justo et al., 2015; Mayer and Landsberg, 2015; Kot et al., 2016; Mokefe et al., 2018). Despite this gap, an increasing number of women are turning to entrepreneurship for employment, economic independence, and self-reliance. In the context of this study, the theoretical framework adopted is the social capital theory, initially defined and developed by Bourdieu (1985). This theory posits that social capital enables groups of people to effectively collaborate within society, organizations, or communities to achieve common goals. For instance, following Cyclone Freddy's devastation in Malawi in February 2023, various stakeholders, including government agencies, international and local humanitarian organizations, businesses, entrepreneurs, development partners, NGOs, and other stakeholders, collaborated to restore normalcy to affected communities. The social capital theory emphasizes that social relationships serve as resources for developing and accumulating human capital (Claridge, 2018). Savage and Kanazawa (2002, 2004) define social capital as preferences for companionship in general, along with specific preferences for cues indicating higher levels of social capital. Humans are inherently social beings, evolving to thrive in social environments. Many of our desires and necessities cannot be fulfilled through solitary actions; rather, they require collaboration and teamwork. Social capital encompasses the benefits derived from sociability, stemming from the innate human inclination to consider others and engage in generous and cooperative behavior (Claridge, 2018). Putnam (1993) defines social capital as the features of social organizations, such as networks, norms, and trust that facilitate action and cooperation for mutual benefit. Putnam suggests that social capital serves as a quality that enables interpersonal or individual coordination, and its presence can be compared across different cities, regions, and even countries (Tzakis, 2013).

In our context, the impact of social capital on business performance through participation in social grouping forums or associations represents an investment in social capital that allows women entrepreneurs to establish networks within their respective business sectors, acquire valuable skills, and feel a sense of belonging to a business community, which offers numerous benefits to its members. These benefits include training, access to coaching, mentorship, financial grants, and seed capital for start-up entrepreneurs, and assistance with registration processes. The participation of women entrepreneurs in these social capital groupings yields both positive and negative effects. Positive effects manifest as business growth, increased sales volumes, improved access to financing, job creation, and high sales turnovers, while negative effects may include inequalities in obtaining higher leadership positions and accessing market information. The social capital theory encompasses three main dimensions, which will be critically analyzed in the paper . Janine Nahapiet and Sumantra Ghoshal delineate the distinction between structural, cognitive, and relational social capital, which is widely recognized and accepted as the framework for understanding social capital theory. While these dimensions serve as conceptual tools for analytical purposes, in practice, social capital involves complex interactions among them. Structural social capital pertains to access to people and resources within

a network, while cognitive and relational social capital involve the exchange of resources based on shared understandings and feelings of trust among actors within a social context, such as a group, organization, or community (Claridge, 2018). Building on Granovetter's (1992) discussions of structural and relational embeddedness, social capital conforms to the widely accepted notion that it encompasses aspects of social structures and the nature of social relationships, particularly norms. Therefore, it encompasses both structural and relational dimensions of social capital (Claridge, 2018).

Network Heterogeneity and the Business Performance of Women Entrepreneurs

The study revolves around the limited number of studies that have explored the relationship between Heterogeneity and business performance in various organizations, both regionally and globally. Lu, Chen, Huang, and Chien (2015) conducted a study on the impact of workforce Heterogeneity (Diversity) on organizational performance. This study involved 93 German companies and surveyed 14,260 employees. The findings revealed that Heterogeneity enhances the effectiveness of human resource systems, leading to the acquisition and development of resources that promote desirable behaviours, ultimately positively impacting organizational performance. Similarly, Backes-Gellner and Veen (2009) conducted a study involving 18,000 firms and two million employees globally. Their research concluded that Heterogeneity does not lead to a decrease in firm productivity; instead, it positively influences company performance in terms of creativity and innovation, contributing to overall organizational success. Another study by Karen Jehn and Katerina Bazrukova from the Wharton School at the University of Pennsylvania focused on the effects of Heterogeneity on business performance. They analyzed data from a large Fortune 500 information processing company with over 26,000 employees, where Heterogeneity had been a central driver of both social and business agendas for over half a century. The results indicated that Heterogeneity had a significantly positive impact on group processes, with the nature of this impact depending on whether Heterogeneity pertained to gender or constructive group processes. However, overall, Heterogeneity had a positive significant effect on the company's business processes. Erhardt et al. (2003) discovered that gender Heterogeneity within management teams is linked to improved financial performance for companies, as evidenced by higher return on investment and return on assets. Given the aforementioned arguments, the following hypothesis is proposed:

H1: *The greater the heterogeneity of women entrepreneurs' networks, the higher their business performance*

Network Multiplexity and Business Performance

Claro and Gonzalez (2012) conducted a study examining network centrality and multiplexity in relation to sales performance. They analysed 3,680 connections within a firm's network and 866 connections in the ego-network. The study concluded that

network activity significantly influences organizational performance, supporting hypothesis one, which suggested that sales managers with high centrality in the social network achieve higher performance in terms of annual sales. Additionally, the study found that multiplexity positively impacts organizational performance in terms of sales volumes. Their findings yielded significant results, indicating a positive impact of various types of connections on annual sales. Therefore, multiplexity was found to positively affect organizational performance based on the study findings. A similar study by Weber (2021) focused on media multiplexity in entrepreneur-mentor relationships. Hypothesis one posited that the more communication channels entrepreneurs utilized to engage with mentors, the greater variety of resources they would gain from the mentorship. The findings confirmed a positive significant relationship between media multiplexity and relational multiplexity, suggesting that the more media channels entrepreneurs utilized to communicate with mentors, the broader the range of resources they acquired from the relationship. In light of the aforementioned arguments, the following hypothesis is proposed:

H2: *The greater the multiplexity of women entrepreneurs' networks, the higher their business performance.*

Intra-network Communication Frequency and Business Performance

Shazia (2010) conducted a study in Tanzania to investigate the impact of communication on employee performance. The findings revealed a positive and significant relationship between communication frequency and employee performance in various organizational settings. Similarly, Brandy and Veronica (2012) conducted a study affirming that effective communication frequency positively impacts home, work, and social situations, strengthening connections with others and enhancing teamwork, decision-making, and problem-solving abilities. Effective communication facilitates the conveyance of negative or challenging messages without causing conflicts or damaging trust among peers. Furthermore, Otoo (2015) conducted a study in Ghana's Kumasi region to examine the effect of communication on employee performance. The findings indicated that the concreteness, completeness, and consistency of communication frequency among employees have a positive and significant impact on workers' performance. This suggests that when the effectiveness of communication processes and mechanisms improves, there is a corresponding enhancement in workers' performance within the organizational setup. Based on the above arguments, the following hypothesis is proposed:

H3: *The greater the frequency of intra-network communication in women entrepreneurs' networks, the higher their business performance*

Intra-network Emotional Closeness and Business Performance

A study, aligned with the findings of Carli et al. (1991) and Devendorf and Highhouse (2008), revealed that establishing a common disclosure closeness with an individual

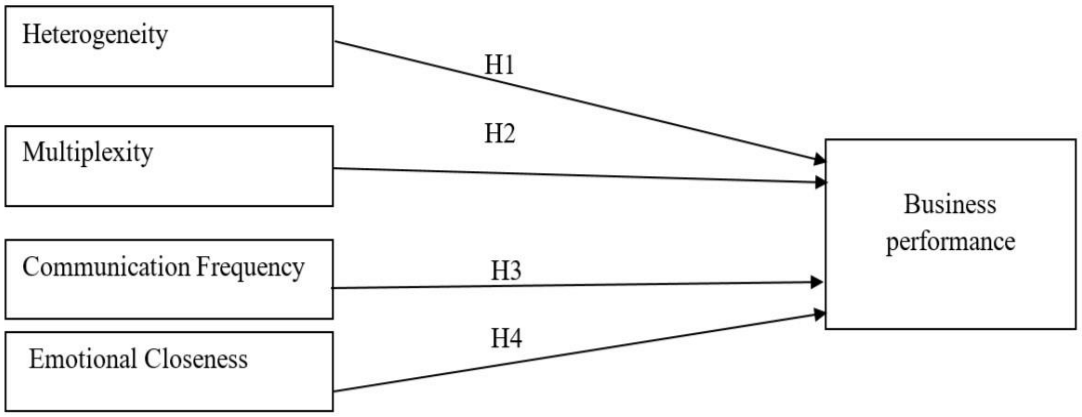
significantly enhances emotional closeness, warmth, competence, and leadership ability. This, in turn, contributes to the improvement of individual productivity performance as well as overall organizational or business performance. Another study, focusing on emotional closeness and customer loyalty in Bumn banks in Medan City, concluded that emotional closeness positively influences customer loyalty, which is crucial for maintaining business continuity. Essentially, emotional closeness directly impacts customer loyalty and retention. Emotional closeness is viewed as a form of social regulation of emotion, serving as a mechanism for protecting against the social aspects of depression or worries that women entrepreneurs may encounter while conducting business. Physical touch, as a form of emotional closeness among women entrepreneurs, has been found to help regulate negative emotions, as indicated by a study conducted by Coan et al. (2006). Furthermore, emotional closeness has a positive impact on regulating depression, worries, and other negative emotions. Moreover, Flores and Howard (2014) conducted a study on the desired emotional closeness moderating the prospective relations between perceived emotional closeness levels and psychological distress. The findings revealed a positive impact of emotional closeness (B=0.94, p-value of 0.001), indicating that emotional closeness aids in mitigating the negative effects of depression, anxieties, and worries experienced by women entrepreneurs while managing their businesses. XXX

H4: *The greater the emotional closeness in women entrepreneurs' networks, the higher their business performance.*

The Conceptual Framework

The study's conceptual framework centers on the relationship between four independent variables (heterogeneity, multiplexity, communication frequency, and emotional closeness) and one dependent variable (business performance). Taken together, these four independent variables are hypothesized to collectively and individually influence the dependent variable, business performance, which is operationalized in terms of growth, profitability, and sustainability of entrepreneurial ventures. The framework therefore positions social network attributes as vital determinants of entrepreneurial success, offering a lens through which the dynamics of interpersonal relationships can be linked to tangible business outcomes.

Figure 1: The conceptual framework.



METHODOLOGY

Research Design

This study adopted a quantitative cross-sectional survey design. A cross-sectional study quantifies the outcomes of interest and/or examines the relationship between two or more variables within a study using data collected at one single point in time. According to Babbie (2012), quantitative studies are described as "If" or "Did" research. The researchers wanted to determine if something happened and to what degree something happened by collecting numerical data. The study adopts a quantitative approach since it aims to determine the impact of social capital on the business performance of women entrepreneurs.

Study Population and Sample

The targeted population of interest for the study included women-owned businesses. These individuals were selected randomly based on their various businesses and industry settings, such as clothing and cosmetics, food and beverage, farming, retail and trading, services and others. This research used and adopted random sampling techniques in drawing its sample size. Random sampling is a selection procedure that gives each element of the population a non-zero, known positive probability of being included in the sample size (Campbell et al., 2020). When the sampling frame is known, that's when random sampling can be done. The study randomly sampled a total of 384 women entrepreneurs who participated in this research.

Measures

A structured questionnaire was used in the study to measure the five variables that the researchers intended to explore. A structured questionnaire is a group of predetermined quizzes which are intended to extract specific data and information from the research respondents (Roopa and Rani, 2012). These questions were pre-

written and responders were given a list of predetermined answer possibilities. **Table 1** below summarizes the study measurement tool.

Table 1: Construct Measures

Measure	**Survey Questions**	**Source**
Heterogeneity	Heterogeneity was computed using the Hirschman's Herfindahl Index (HHI) formula, which captures Heterogeneity (Baum et al, (2000). The formula is calculated as follows: $\text{Heterogeneity} = [1- \sum_{ij} (PA_{ij})^2]/NA_i$ where PA_{ij} is the proportion of all female entrepreneur *i*'s connections with cooperators' industry *j*, and *NAi* is a female entrepreneur *i*'s total number of cooperators. For example, if a respondent has a total of 10 connections spanning five industries (i.e., A, B, C, D, and E), with the distribution as follows: 2 members from industry A, 1 from industry B, 3 from industry C, 2 from industry D, and 2 from industry E. The HHI index is computed as follows: $HHI= [1- \sum_{ij} (PA_{ij})^2]/NA_i$ $HHI= \{1- [(2/10)^2 + (1/10)^2 + (3/10)^2 + (2/10)^2 + (2/10)^2]\}/10$ $HHI= \{1- [(0.04+0.01+ 0.09) +(0.04+0.04)]\}/10$ $HHI = 0.078$	Baum et al., 2000.
Multiplexity	Multiplexity was computed as the sum of the uniplex links plus twice the multiplex links, then dividing the result by the number of potential multiplex links. For example, if a respondent had 5 uniplex links, 3 multiplex links, and an overall network of 8, multiplexity would be computed as follows:	Kramer, 1999.

	Multiplexity = [5 + (2X3)] / (8X2) = 0.69	
Communication frequency	The scales assess the dimension of communication. Five-point Likert scale was used by the participants to specify their level of agreement as follows: (1) Strongly disagree, (2) Disagree; (3) neither agree nor disagree; (4) Agree; (5) Strongly agree. where the following two questions were asked: (1) I frequently communicate with business co-operators about business-related topics. (2) I have regular communication with business co-operators regarding industry trends and market information.	Somers and Canives, 2003.
Emotional closeness	The Perceived Interpersonal Closeness Scale (PICS) was used to measure emotional closeness. A psychometric properties scale was used whereby the research participants had to specify their level of agreement on a five-point scale (1-5) as follows: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree;(4) Agree;(5) Strongly agree. Where the following five questions were asked: (1) How emotionally close do you feel with your business co-operators in your business relationships? (2) How comfortable are you sharing personal experiences or challenges related to your business with your co-operators? (3) How much trust do you have in your co-operators' intentions and actions in supporting your business?	Popovi, Milne and Barret, 2003.

	(4) To what extent do you feel a sense of belonging and mutual support with your co-operators? (5) How confident are you in relying on your business co-operators for advice or assistance in your business operations?	
Business Performance	The researchers used three indicators to capture business performance: sales growth rate, profitability and cash flow performance. A 5-point Likert- scale was developed (ranging from 1 "extremely bad performance "to 5 "excellent performance") to rate the business's financial performance on gross margin and cash flow and profitability of the business, where the following three questions were asked: (1) Over the past 1 year, has your financial performance been outstanding? (2) Over the past 1 year, has your sales growth been outstanding? (3) Over the past 1 year, have you been more profitable than your competitors?	Wiklund, 1999. Wiklund and Sherpherd, 2005

Data Analysis

The data collected was analyzed using regression analysis with a software package of the social sciences (SPSS). The questionnaire results were used and factored in to generate data that contains many observations (responses) for each dependent and independent variable. The regression analysis was then used to evaluate the strength and direction of the relationship between the independent and the dependent variables.

RESULTS

Sample characteristics of the study

The study examined a diverse group of women entrepreneurs in Malawi, considering several key demographic and professional variables. The sample consisted of 100%

female participants. The age distribution revealed the following significant statistics: the largest group was in the 25-34 age range, accounting for 40%, followed by the 35-44 age range at 30.1%, the 45-54 age group at 16.5%, and the remaining groups as follows: 18-24 years at 9.4% and 55 and above at 4%. Educational background varied significantly, with the majority of participants holding a Malawi School Certificate of Education (MSCE) at 50.4%. This was followed by those with no formal education (37%), and the remaining participants were distributed as follows: professional certificate (5.4%), diploma (4%), degree (2.3%), master's degree (0.3%), and Doctor of Philosophy (PhD) (0.6%). In terms of years in business, the distribution was as follows: the majority (48%) had been operating businesses for 1-5 years, followed by 6-10 years (21.3%), 11-15 years (15%), 16-20 years (7.1%), businesses operating for less than a year (3.4%), and those with 20 or more years of experience (5.2%). Regarding the types of businesses (industries), the distribution was as follows: the majority (48%) were involved in other industries, followed by clothing and cosmetics (28%), farming (16.6%), retail and trading (3.7%), food and beverage (2.3%), and services (1.4%).

Preliminary Tests

Three preliminary tests were conducted to ensure the validity and reliability of the data. The purpose of running these tests was to assess the quality and robustness of the data collected. These tests were (1) Harman's Single-Factor Test, (2) Cronbach Alpha test, and (3) Multicollinearity assessment. After the data had passed all preliminary tests, a regression analysis was carried out in SPSS.

Common Method Bias

Harman's Single-Factor Test is used to assess the presence of common method bias in a dataset. Harman's Single-Factor Test is a statistical method which is frequently used to detect the availability of common method bias in a dataset. Harman's Single-Factor Test requires loading all the measures in a study into an exploratory factor analysis with the assumption that the presence of common method variance indicates the emergence of either a single factor that accounts for the majority of covariance among the measures (Podsakoff *et al*. 2003). If a single factor accounts for a large portion of the variance of more than 50%, this suggests the presence of common method bias is likely to be present (Kock, 2016). Conversely, if the single factor accounts for a relatively small portion of less than 50% variance, it indicates that common method bias is unlikely to be a major issue in the dataset.

The Harman's Single-Factor Test was employed for all twelve questions of the study to assess the potential presence of a common method bias in the dataset. Table 2, below, depicts the total variance explained by each component under the principal component analysis, both in terms of initial eigenvalues and extraction sums of squared loadings. Across twelve components analyzed, the first component shows an initial eigenvalue of 3.865, which represents 32.212% of the total variance. As the initial eigenvalue of the first component substantially surpasses the others, this

suggests that a single dominant factor might be influencing the data. This is consistent with Harman's Single-Factor Test, where a common method bias could lead to one component explaining a substantial portion of variance across various variables (Podsakoff *et al*. 2003). The subsequent components contribute progressively less to the cumulative variance explained, as shown in Table 4 below. This means that no common method bias was detected in the dataset. **Table 2** below represents Harman's Single Factor Test.

Table 2: Harman's Single Factor Test Results

Item	Total	% of Variance	Cumulative %	Total	Cumulative %
1	3.865	32.212	32.212	3.865	32.212
2	2.219	18.495	50.707	2.219	50.707
3	1.116	9.302	60.009	1.116	60.009
4	.973	8.112	68.121		
5	.911	7.591	75.713		
6	.746	6.217	81.930		
7	.533	4.438	86.367		
8	.479	3.988	90.355		
9	.366	3.052	93.407		
10	.357	2.978	96.385		
11	.274	2.282	98.666		
12	.160	1.334	100.000		

Construct Reliability

Cronbach's alpha is a commonly used measure of internal consistency or reliability for items and scales, particularly in the social and organizational sciences (Douglas & Thomas, 2015). It estimates the reliability of responses to a questionnaire or rating scale, reflecting the stability of the measurement tools (Bujang et al., 2018). This measure indicates how closely related the items on a scale are and whether they measure the same underlying construct.

A high Cronbach's alpha value suggests strong internal consistency, meaning the items within the scale are highly correlated and reliably measure the intended construct. Conversely, a low Cronbach's alpha value indicates poor internal

consistency, suggesting that the items may not consistently or reliably measure the construct. Cronbach's alpha values range from 0 to 1, with values of 0.70 or higher typically accepted for most research purposes, indicating satisfactory internal consistency (Taber, 2018). Therefore, a high value indicates strong consistency, while a low value signals poor internal consistency. Table 3 presents the reliability statistics for the five study variables.

Table 3: Reliability Statistics for the Study Variables

Variable	Number of Items	Cronbach Alpha
Heterogeneity	1	1
Multiplexity	1	1
Communication Frequency	2	.765
Emotional Closeness	5	.812
Business Performance	3	.906

Since heterogeneity and multiplexity are indices, their Cronbach's alpha is 1. The reliability of the communication frequency measurement was assessed using Cronbach's alpha, yielding a coefficient value of 0.765. This indicates an acceptable level of internal consistency or reliability among the two items, suggesting that the items in the communication frequency tool are closely related and collectively measure the intended construct with a satisfactory level of reliability. The Cronbach's alpha coefficient for the emotional closeness scale was calculated at 0.812, indicating a high degree of internal consistency among the five items. This suggests that the items in the emotional closeness tool are closely related and reliably measure the intended construct with strong consistency. The Cronbach's alpha for business performance was calculated at 0.906, reflecting a high degree of internal consistency among the three items. This suggests that the items in the business performance tool are closely related and reliably measure the intended construct with a strong level of consistency.

Multicollinearity Assessment

Multicollinearity assessment is used to determine the presence and severity of multicollinearity among the predictor variables in a regression or multivariate analysis. Multicollinearity occurs when two or more independent variables in a regression model are correlated. This correlation poses a problem because independent variables should not be predicted from one another (Hayes and Scott, 2023). A high degree of correlation between variables can distort the model fitting process and make the results difficult to interpret.

The multicollinearity between independent variables is evaluated using collinearity statistics, such as tolerance and the variance inflation factor (VIF). A VIF above 10 suggests the presence of multicollinearity, as it inflates the variance of regression parameters, leading to incorrect identification of important predictors in a statistical model. Generally, VIF values below 10 are considered acceptable or moderate, with values below 5 preferred to minimize concerns about multicollinearity (Hayes and Scott, 2023).

For each predictor variable, tolerance is also accounted for. Tolerance is the reciprocal of VIF and quantifies the proportion of variance in a predictor variable that is not explained by the other predictor variables. Tolerance values close to 1 indicate low multicollinearity. If VIF values are below 10, it suggests that multicollinearity is not a significant concern within the dataset. However, VIF values above 10 indicate serious multicollinearity that requires correction. In the current study, all VIF values were below 10, hence the problem of multicollinearity.

Regression Analysis

Regression analysis was conducted to assess the impact of four social capital-related independent variables—heterogeneity, multiplexity, communication frequency, and emotional closeness—on one dependent variable, business performance. This results in four hypothesis tests. The impact of heterogeneity on business performance was addressed by Hypothesis 1, multiplexity by Hypothesis 2, communication frequency by Hypothesis 3, and emotional closeness by Hypothesis 4. All four hypotheses explore how social capital affects the business performance of women entrepreneurs.

Hypothesis 1 predicted a positive relationship between heterogeneity in women entrepreneurs' networks and business performance. The regression analysis results showed that heterogeneity ($B = 0.137$, $p < 0.05$) has a significant positive impact on business performance. This confirms a significant positive relationship between heterogeneity and business performance, thus supporting Hypothesis 1. This means that, as heterogeneity increases, business performance is expected to grow by 0.137 units for every unit increase in heterogeneity.

Hypothesis 2 predicted a positive relationship between multiplexity in women entrepreneurs' networks and business performance. The regression analysis found that multiplexity ($B = 0.185$, $p < 0.05$) significantly positively impacts business performance. This confirms a significant positive relationship between business performance and multiplexity, supporting Hypothesis 2. The interpretation is that business performance is anticipated to increase by 0.185 units for every unit increase in multiplexity.

Hypothesis 3 predicted a positive relationship between communication frequency in women entrepreneurs' networks and business performance. The regression analysis revealed that communication frequency ($B = 0.188$, $p < 0.05$) has a significant positive

impact on business performance. This confirms a significant relationship between business performance and communication frequency, thereby supporting Hypothesis 3. This means business performance is expected to grow by 0.188 units for every unit increase in communication frequency.

Hypothesis 4 predicted a positive relationship between emotional closeness in women entrepreneurs' networks and business performance. The regression analysis confirmed that emotional closeness ($B = 0.2$, $p < 0.001$) has a significant positive impact on business performance. This confirms a significant relationship between emotional closeness and business performance, supporting Hypothesis 4. Business performance is predicted to increase by 0.2 units for every unit increase in emotional closeness.

DISCUSSION

The primary objective of this study was to investigate the relationship between social capital and business performance in female-run businesses. Social capital, in this context, includes factors such as heterogeneity, multiplexity, communication frequency, and emotional closeness, which influence the business performance of women entrepreneurs. The study found a positive relationship between social capital and business performance among women entrepreneurs in Malawi, a low-income country. This finding is consistent with other studies, such as Buy & Bow (2002).

The study first explored the impact of network heterogeneity on business performance. The regression analysis showed that heterogeneity has a significant positive effect on the business performance of women entrepreneurs. In other words, the more heterogeneous a woman entrepreneur's network, the better her business performance. This outcome aligns with the findings of scholars such as Lu, Chen, Huang, and Chien (2015), as well as Erhardt et al. (2003). Next, the study examined the impact of multiplexity on business performance. The regression analysis revealed that multiplexity also has a significant positive impact on women entrepreneurs' business performance. This indicates that a higher level of multiplexity within women's networks is associated with improved business performance. This finding is supported by studies like those of Claro and Gonzalez (2012) and Weber (2012).

The study then looked at the role of communication frequency in business performance. Again, the regression analysis confirmed that communication frequency has a significant positive impact. The higher the frequency of communication in women entrepreneurs' networks, the better their business performance. This relationship is supported by previous research, including studies by Brandy and Veronica (2012) and Otoo (2015). Finally, the study investigated emotional closeness and its effect on business performance. The results indicated that emotional closeness significantly and positively influences business performance. This means that greater emotional closeness within women entrepreneurs' networks leads to better business performance. Supporting studies include those by Coan et al. (2006) and Flores and Howard (2014).

CONCLUSION

In light of these findings, the current study has important theoretical and practical implications. From a theoretical standpoint, it contributes to the literature on social capital theory by demonstrating how variables such as heterogeneity, multiplexity, communication frequency, and emotional closeness positively influence business performance in women-owned businesses. These findings reinforce the idea that the adoption of social capital has beneficial effects on business growth and organizational performance.

Practically, the significant impact of social capital exchanges is evident in improved business performance when the knowledge gained from these exchanges is applied. Regular interactions and networking allow entrepreneurs to continuously acquire knowledge, strengthening relationships and fostering mutual growth. In this context, women entrepreneurs who share information and exchange knowledge through their networks experience notable benefits. When these shared skills, knowledge, and experiences are applied to their ventures, they lead to a marked improvement in business performance (Stallings, 2013).

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