

**THE IMPACT OF GHANA'S ENTREPRENEURIAL ECOSYSTEM ON WOMEN'S
ENTREPRENEURIAL PERFORMANCE: THE MODERATING ROLE OF
ENTREPRENEURIAL IDENTITY**

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Abstract

Women business leaders are generating a tremendous impact in their markets, industries and communities through innovation, job creation and economic growth. However, their contributions are often lost in the prevailing narrative that women are over-represented among the poorest and most vulnerable entrepreneurs globally. A review of the extant literature has postulated challenges that women entrepreneurs faced several challenges in the ecosystem in which it operates. Women entrepreneurs have access to limited capital as compared to its men counterparts, fewer opportunities to network and build relationships with other entrepreneurs, investors, and mentors, which affects their access to resources and knowledge. Due to the issue of gender-based stereotypes and biases that women entrepreneurs constantly face, they are unable to meet mentors who can provide them with guidance and support to grow their business. These women-specific challenges have become barriers limiting the growth of women entrepreneurs, however insufficient reports highlight how these hindering factors can create opportunities for the growth of women entrepreneurs. Dwelling on the Process theory, the study explored the impact of Ghana's entrepreneurial ecosystem on women's entrepreneurial performance with the moderating role of entrepreneurial identity. The study was a cross-sectional quantitative research design with data collected from 413 women entrepreneurs in the Greater Accra Region using structured questionnaire collected using the survey monkey online tool. The data was analyzed using IBM SPSS v.25 and the PLS-SEM v.4.0. The first objective was examined through 12 hypotheses, while the second was analyzed using 2. The study finds that access to finance has positive and insignificant effect on the entrepreneurial performance of women in Ghana. Likewise, education and training have a negative and insignificant effect on the market and operational performance of women entrepreneurs in Ghana. The results of the study postulated that the availability of infrastructure and resources has a negative but significant effect on both the market and operational performance of Ghanaian women entrepreneurs. The results of the study further reported a positive but insignificant impact of network and social capital on the market performance and operational performance of women entrepreneurs in Ghana. The results of the study in relations to the regulatory environment and women entrepreneurial performance indicates an insignificant relationship between regulatory environment and market performance and regulatory performance whilst cultural and social factors within the Ghanaian ecosystem negatively but significantly influence the entrepreneurial performance of women in Ghana but innovation and knowledge spillover have a positive and significant impact on both the market performance and operational performance. Furthermore, the findings of the study suggest that Ghana's entrepreneurial ecosystem may not have a substantial direct impact on women's entrepreneurial performance in Ghana. Further practical and theoretical implications of the study are discussed in the thesis.

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Dedication

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

The thesis is centered around women's entrepreneurship in Ghana. The COVID-19 pandemic has negatively affected Micro, Small and Medium enterprises and women owned businesses across the world and Ghana inclusive. Businesses and livelihoods have been affected by the government-mandated lockdowns. Micro, small and medium enterprises are particularly feeling these impacts, with businesses having to shut down and experiencing loss of revenue, demand, and cash flow, as well as supply chain shortages. Making up more than 70% of global employment and 50% of GDP, MSMEs remain important to the global and local economies and must be prioritized in economic recovery efforts (Agarwal *et al.*, 2023). It is estimated that 90.2% of women in West Africa work in the informal economy and are subjected to various forms of business constraints such as the lack of access to capital and infrastructure as well as socio-cultural factors that hinder their business performance. This challenge was further exacerbated by the COVID-19 pandemic where most women-owned businesses struggled to operate. This chapter begins with the background of the study, then continues with the problem statement, research objectives, research questions, significance of the study, and chapter disposition.

1.1 Background to the Study

Women business leaders are generating a tremendous impact in their markets, industries and communities through innovation, job creation and economic growth. However, their contributions are often lost in the prevailing narrative that women are over-represented among the poorest and most vulnerable entrepreneurs globally (GEM, 2019; Guzman and

Kacperczyk, 2019; Rajan, Muralidharan and Ravi, 2019; Gorbatai, Younkin and Burch, 2023; Hill *et al.*, 2023; Bravo, 2024; Goryunova and Madsen, 2024). Empirical reviews have indicated that even though women entrepreneurs significantly contribute to the growth of the economy, launching of new ventures appears to be particularly disadvantageous for women (Coleman and Robb, 2018). The global entrepreneurship monitor (GEM) (GEM, 2022) noted that enabling environment for women in most countries across the world is very low, indicating a persistent lower entrepreneurial drive of women. The GEM, (2022) report indicated that the entrepreneurial drive and intention of women decreased from 19.1 percent in 2019 to 10.7 percent in 2021 with the sharpest decline in lower-income countries. In lower-income countries, the startup rates showed that the biggest decline in 2020, dropping by half for women from 8.5 percent to 4.1 percent.

A review of the extant literature indicates that women entrepreneurs, especially in the rural and remote regions are faced with unique challenges (Rocha and Van Praag, 2020, 2020; Dhakal, Wiesner and Maraseni, 2024; Emon and Nipa, 2024; Khazami, Nefzi and Yahyaoui, 2024). Rocha and Van Praag (2020) in their study on gendered identity and women entrepreneurship concluded that women entrepreneurs often experience tension between their gendered identities and the masculine norms associated with entrepreneurship. McAdam (2022) concluded that women entrepreneurs often face barriers related to their family responsibilities, lack of affordable childcare and the expectation of gendered division of labor. In developing economies such as Ghana, the rules and systems have been designed on male norms and are therefore not gender neutral. These are stereotypes that affect women entrepreneurs in access to key resources to make them competitive and their businesses sustainable (Lin *et al.*, 2018; Khan *et al.*, 2021; Yang, Huang and Gao, 2022; Hill *et al.*, 2023).

An Entrepreneurial Ecosystem is viewed from a macro and micro level, where macro is the broader economic environment in which entrepreneurship takes place, the national or regional level (Wurth, Stam and Spigel, 2022). It includes factors such as government policies, economic conditions, legal and regulatory frameworks, and access to funding and resources. The macro-level influences the overall health of entrepreneurship and innovation through culture, institutions, human capital, finance, markets, and technology (Wurth, Stam and Spigel, 2022). How these, influence women entrepreneurs, is not clear. Duan *et al.* (2023) examined the relationship between entrepreneurial ecosystems and early-stage entrepreneurial activity across 45 countries and found that macro-level factors have a stronger impact on early-stage entrepreneurial activity than micro-level factors.

The Micro Entrepreneurial Ecosystem refers to the specific environment in which a particular entrepreneur operates (Spigel, 2020). It includes factors such as access to talent, funding, infrastructure, network, mentorship, and market opportunities. Spigel (2020) argues that micro-entrepreneurial ecosystems are the local clusters of entrepreneurial activity that affect the success of individual startups and their ability to grow and scale. Macro and micro-level entrepreneurial ecosystems are important for fostering entrepreneurship and innovation (Autio, 2022). The macro-level ecosystem sets the overall framework for entrepreneurship and innovation, while the micro-level ecosystem provides the resources and support necessary for individual startups to succeed.

The performance of an entrepreneur is viewed through the success of the venture or entrepreneurial business entities that they are running which can be measured through market performance and operational performance (Kuratko *et al.*, 2017). Market performance indicators, such as market share, customer acquisition, and customer retention, provide insights into the venture's ability to compete in the market, generate sales, and build customer relationships (Wach *et al.*, 2020). This information is crucial for understanding the overall

success of an entrepreneurial venture. Operational performance indicators, such as efficiency, innovation, and employee satisfaction, reflect the venture's ability to manage resources, develop new products or services, and create a positive work environment (Basco, Hernández-Perlines and Rodríguez-García, 2020). By focusing on market performance and operational performance, researchers can obtain a comprehensive understanding of the venture's competitive position, its ability to create value for customers, and its capacity to manage resources effectively.

Entrepreneurial identity is a complex and dynamic construct shaped by personal, social, and cultural factors (Corbett, Marino and Alsos, 2023). Scholars (Hannon, 2018; Corbett, Marino and Alsos, 2023; Johannisson, 2023) highlight the role of entrepreneurial identity as it provides a sense of self through the narrative that individuals construct around their entrepreneurial aspirations and experiences. Wraae, Brush and Nikou (2021) argue that entrepreneurial identity is a dynamic and multi-dimensional construct that affects various stages of the entrepreneurial process such as opportunity recognition, innovation and growth. Shelton and Minniti (2018) highlight those social and cultural signals, such as media coverage and role models, can affect entrepreneurial identity by providing inspiration and legitimacy.

The Ghana Statistical Service, (2021) reports that 50.7 % of the population are women. The Global Entrepreneurship Monitor (GEM) report on the total (early-stage) entrepreneurial activity (TEA) indicates that women in Ghana recorded over 36.5% TEA which is higher than the sub-Saharan African regional average of 26.4% and the global average of 10.2% (Global Entrepreneurship Monitor, 2023). Even though women entrepreneurial activity is on the rise in Ghana, most of the businesses are in the informal sector with many being micro and small businesses (Agyire-Tettey, Ackah and Asuman, 2018). Majority of these women led businesses operates in small scale food processing,

textile manufacturing and hairdressing Adom and Asare-Yeboah (2016) with a very slow pace of expansion relative to their male counterparts as a result of many socio-economic and technical challenges (Boahen, Dankwah and Kwakwa, 2024).

Gender norms and preconceptions in Ghana are a major challenge for female entrepreneurs as Ghanaian women are expected to run the household and care for others. This view may limit their entrepreneurial efforts (Agyire-Tettey, Ackah and Asuman, 2018). Since business is often seen as a male-dominated field, female entrepreneurs may face resistance and a lack of support from their families and communities (Adom and Asare-Yeboah, 2016). Lack of education and training equally hinders women entrepreneurs. Boahen, Dankwah and Kwakwa (2024) found that Ghanaian female entrepreneurs have lower educational attainment than male entrepreneurs. This disparity may hamper women's business skills. Due to time, family, and social constraints, women may struggle to enroll in entrepreneurship training programmes (Agyire-Tettey, Ackah and Asuman, 2018).

Economic barriers, mostly from limited market and network access, have frequently been found to negatively affect business success. Samuel, Ernest and Awuah (2013) found that Ghanaian female entrepreneurs have trouble getting loans from traditional banks. These issues stem from lack of collateral, poor credit, and gender bias. Thus, many women use personal funds and loans from family and friends to build their enterprises, which may not be enough (Agyire-Tettey, Ackah and Asuman, 2018). Ghanaian female entrepreneurs also face strong competition in oversaturated local marketplaces (Adom and Asare-Yeboah, 2016). Additionally, they may lack access to important business networks and information, limiting their ability to explore new prospects and develop their client base (Agyire-Tettey, Ackah and Asuman, 2018).

Government policies, legislations, and support networks also hinder Ghanaian female entrepreneurs. Adom *et al.* (2018) that Ghanaian female entrepreneurs view government laws and procedures as complicated, time-consuming, and costly. Their perspective may hinder them from formalizing their firms. Women may also face discrimination from government officials and institutions (Ernest and Awuah, 2013). Ali and Kumar (2018) noted that Ghanaian female entrepreneurs often lack expertise and support. This limitation may hinder their ability to gain new talents, resources, and contacts. Considering the formidable obstacles encountered by female entrepreneurs in Ghana, it is imperative to do study on this subject in order to get a deeper comprehension of their experiences, requirements, and possible remedies.

Understanding the entrepreneurial ecosystem using entrepreneurial identity as a moderating factor, is pivotal to enhancing the performance of women entrepreneurs in Ghana because entrepreneurial identity can have a significant impact on the performance of entrepreneurs (Agyapong, Aidoo and Akomea, 2022; Sreejith and Sreejith, 2023). It is the position of this paper that a well-developed entrepreneurial identity of women in Ghana will enhance their resilience to the many challenges that they face as women entrepreneurs. This is because women entrepreneurs who deeply identify with their role as entrepreneurs rather than seeing their business as passive income generating activity may likely persist through the socio-cultural and technical barriers in order to adapt to changing circumstances.

1.2 Identified gaps guiding the study

A review of the extant literature has postulated challenges that women entrepreneurs face several challenges in the ecosystem in which they operate. A study by (Bird and Brush, 2020; and Cabrera *et al.*, 2023) concluded that women entrepreneurs have access to limited capital as compared to their men counterparts. Ahl *et al.* (2023) concluded that women entrepreneurs have fewer opportunities to network and build relationships with other

entrepreneurs, investors, and mentors, which can affect their access to resources and knowledge. Scholars (Canut Cascalló and López Planas, 2020; Cardella, Hernández-Sánchez and Sánchez-García, 2020; Ahl and Marlow, 2021) reported that due to the issue of gender-based stereotypes and biases that women entrepreneurs constantly face, they are unable to meet mentors who can provide them with guidance and support to grow their business. These women-specific challenges have become barriers limiting the growth of women entrepreneurs; however, insufficient reports highlight how these hindering factors can create opportunities for the growth of women entrepreneurs. This study intends to close the gap in the literature by assessing the extent to which identified barriers in the extant literature affect positively and negatively the performance of women entrepreneurs.

It can be stated that methodologically, research on women entrepreneurship is qualitative and exploratory, with little to no focus on adopting structured and advanced quantitative techniques like the Partial Least Squares Method. This methodological gap is seen as another major gap in the extant literature on women entrepreneurship. Guerrero, Santamaría-Velasco and Mahto (2021) in their study on the intermediaries and social entrepreneurship identity and its implications for business model innovation adopted a retrospective multiple case study, which was qualitative in nature. de Groot *et al.* (2017) in their study on fueling women's empowerment, an exploration of the linkages between gender, entrepreneurship and access to energy in the informal food sector adopted a qualitative approach. Although (Del Giudice *et al.*, 2019) adopted a quantitative approach, they used a three-way ANOVA in their analysis. This study closes the gap in the literature by adopting the Partial Least Square Methods to better understand the structural relationship between women entrepreneurial ecosystem and their performance with the role of entrepreneurial identity.

Women entrepreneurs in developing economies face unique identity-related challenges that fundamentally impact their business performance. Studies by Brush and Cooper (2012) highlight how societal expectations and traditional gender roles often conflict with entrepreneurial identities, forcing women to navigate complex social dynamics while building their businesses. Research by Ahl and Marlow (2021) demonstrates that women in developing economies frequently struggle with "identity legitimacy" - being recognized and accepted as genuine entrepreneurs rather than just small-scale business owners. The novelty of introducing entrepreneurial identity as a moderating variable between entrepreneurial ecosystem and performance lies in its explanatory power. Traditional studies have focused on direct relationships between ecosystem factors (like access to finance or market opportunities) and business performance. However, Ozasir Kacar and Essers (2019) work suggests that identical ecosystem resources can yield vastly different outcomes depending on how strongly women identify as entrepreneurs. This moderating effect helps explain why some women entrepreneurs thrive while others struggle despite similar ecosystem support. Morris, Santos and Neumeyer (2020) research in emerging markets demonstrates that women with strong entrepreneurial identities are more likely to effectively leverage ecosystem resources, actively seek growth opportunities, and persist through challenges. This understanding opens new avenues for policy interventions that focus not just on providing resources, but on strengthening entrepreneurial identity formation. Understanding entrepreneurial identity as a moderating variable provides a more nuanced framework for analyzing and supporting women entrepreneurs in developing economies, moving beyond simple resource provision to address deeper psychological and social factors that influence business success.

Despite the identity of entrepreneurs being a major topical issue for scholars, there is little agreement on the core nature of entrepreneurial identity in literature (Baker and Powell,

2019; Radu-Lefebvre *et al.*, 2021a; Kelly and McAdam, 2023). Although all work on identities is nested and multi-faceted, entrepreneurship has fundamentally unique implications with regard to identity, which makes deep integration of constructs and definitions difficult (Mmbaga *et al.*, 2020). Thus, making the issue of identity of entrepreneurs very important to further explore in the context of developing economies like Ghana. The researcher has adopted entrepreneurial identity as a moderator in the analysis of the effect of entrepreneurial ecosystem on the performance of women entrepreneurs. Assessing the moderating role of entrepreneurial identity of female entrepreneurs especially in developing economies such as Ghana is important as a strong entrepreneurial identity may mitigate the negative impact of the perceived gender bias on women entrepreneurs' performance (Brush, Edelman, *et al.*, 2019).

Furthermore, the relationship between the entrepreneurial ecosystem and the performance of women entrepreneur may produce a positive outcome when the women exhibit a strong entrepreneurial identity (Gupta, Wieland and Turban, 2019). Adopting and assessing the role of entrepreneurial identity in the interplay between the entrepreneurial ecosystem and entrepreneurial performance may help women entrepreneurs in Ghana and other developing economies overcome the unique challenges they face and also harness the potential of the entrepreneurial ecosystem. It is in light of this that this study explores this relationship with the intent to close these gaps in the literature and contribute to the extant literature on women entrepreneurship in the global south.

It is anticipated among others, the nature and strength of the effect of entrepreneurship identity on the relationship between entrepreneurial ecosystem and performance, would be defined to enable effective evaluation of women entrepreneurial performance in Ghana. It will provide new insights in women entrepreneurial performance and the outcome will aid in the development of policy and programs with the potential for growth and sustainability in

women businesses. Stakeholders such as policy makers, can use the findings to draw up interventions in addressing challenges in the entrepreneurial ecosystem faced by women entrepreneurs in Ghana.

1.3 Research Goal and Objectives

The main purpose of the study is to assess the impact of Ghana's entrepreneurial ecosystem on women's entrepreneurial performance with the moderating role of entrepreneurial identity.

The first objective would be examined through 12 hypotheses, while the second would use 2.

The specific objectives of the study are to:

1. Investigate the effects of the dimensions of entrepreneurial ecosystem on performance of entrepreneurial women in Ghana.
2. Determine the extent to which women entrepreneurial identity moderates the relationship between entrepreneurial ecosystem and performance of entrepreneurial women in Ghana.

1.4 Research Questions

The study seeks to answer the following questions.

1. What are the effects of the dimensions of entrepreneurial ecosystem on performance of entrepreneurial women in Ghana?
2. To what extent does women entrepreneurial identity moderate the relationship between entrepreneurial ecosystem and performance of entrepreneurial women in Ghana?

1.5 Significance of the Study

The findings of the study hold significance implications to researchers in academia, practitioners, policy makers and women entrepreneurs.

To the academic community, the findings of the study expand the literature on entrepreneurship in developing countries, with a particular focus on the role of gender and entrepreneurial identity (Ahl and Marlow, 2021). It provides theoretical groundwork for future research on entrepreneurial ecosystems in African contexts, and on the moderating effects of entrepreneurial identity on performance (Welter, Brush and De Bruin, 2019a). In the context of entrepreneurship studies, a developing country's context provides a unique perspective. By focusing on Ghana, the study contributes to the broader understanding of entrepreneurship in similar settings as the study highlights the challenges and opportunities in the ecosystem that women entrepreneurs are prone to. The study scrutinizes the unique hurdles that women entrepreneurs often confront, particularly in developing countries, where societal norms, lack of access to resources, and systemic barriers can exacerbate these challenges (Campos and Gassier, 2017). This focus significantly contributes to the existing body of knowledge by elucidating women-specific factors that influence entrepreneurial performance, paving the way for interventions that promote women entrepreneurial agenda in developing countries like Ghana.

An innovative facet of the study is its emphasis on entrepreneurial identity, which is how entrepreneurs perceive themselves. The investigation into whether this identity moderates the relationship between the entrepreneurial ecosystem and entrepreneurial performance is particularly significant. This novel concept suggests that a strong entrepreneurial identity may enhance the positive impact of a supportive entrepreneurial ecosystem on performance, a proposition that requires and merits further exploration (Estrada-Cruz *et al.*, 2020).

The study's hypothesis that entrepreneurial identity moderates the impact of the entrepreneurial ecosystem on performance also significantly extends the understanding of successful entrepreneurship. If true, this would suggest that entrepreneurs with a stronger

sense of identity might outperform those with a weaker sense of identity, even within a supportive ecosystem.

Findings from this study may inform policy decisions related to women entrepreneurship in Ghana and similar contexts (Kimbu *et al.*, 2021). By illustrating the relationship between the entrepreneurial ecosystem and the performance of women entrepreneurs, it can guide policies aimed at fostering an environment conducive for women-owned businesses (Isenberg, 2010). If the role of entrepreneurial identity is found to be significant, policies can be tailored to strengthen this aspect, such as through educational programs that cultivate entrepreneurial mindset and identity. The study underscores the integral role that the entrepreneurial ecosystem plays in the performance of women entrepreneurs in Ghana. An entrepreneurial ecosystem, encompassing factors like access to capital, availability of mentoring and networking opportunities, and supportive regulatory environments, significantly influences the likelihood of success for these women-owned businesses. Understanding the nuances of this ecosystem can serve as an essential guide for policymaking. For instance, identifying gaps in access to financial resources could lead to the implementation of policies geared towards improving women entrepreneurs' access to capital. Moreover, the research illuminates the dynamic interplay between the entrepreneurial ecosystem and the performance of female entrepreneurs. An ecosystem that nurtures and supports women-owned businesses can lead to enhanced performance, driving economic growth and contributing to gender equality. Policies that aim to cultivate such an environment could involve regulatory reforms, incentives for women-owned businesses, initiatives to encourage networking and mentoring, and programs to enhance access to technology and digital platforms.

In addition to the entrepreneurial ecosystem, the research underscores the potential significance of entrepreneurial identity in shaping the performance of women entrepreneurs.

If this identity proves to have a significant moderating effect on entrepreneurial performance, it could inform a novel approach to policy making. For example, policies could be designed to promote education and training programs that foster a strong entrepreneurial identity, nurturing the mindset and skills required for entrepreneurial success (Amorós and Cristi, 2011). This focus on entrepreneurial identity could help equip women entrepreneurs with the resilience and adaptability needed to navigate the complex landscape of entrepreneurship. Programs could be instituted that not only deliver business skills but also help cultivate the psychological and emotional facets of entrepreneurial identity. Policies promoting mentoring and role-modeling initiatives could also be beneficial, as seeing successful women entrepreneurs could inspire and strengthen the entrepreneurial identity of other women.

The significance of this study lies in its potential to provide practitioners with a nuanced understanding of the challenges and opportunities within the entrepreneurial ecosystem of women in Ghana. The study and its findings may unearth various factors that either facilitate or hinder the entrepreneurial activities of women. These insights can enable practitioners to create tailored strategies that address these specific challenges and leverage the unique strengths within this ecosystem (Fatoki, 2014). For instance, if the study finds that women entrepreneurs underperform in areas such as access to capital, networking, or venture growth, relevant recommendations will be made to address these challenges. Moreover, considering entrepreneurial identity as a moderating factor brings a novel perspective to the understanding of women's entrepreneurship in Ghana. The investigation into how this identity shapes women's entrepreneurial performance can equip practitioners with valuable insights.

For women entrepreneurs in Ghana and similar settings, this study provides a valuable self-awareness tool. By understanding the importance of the entrepreneurial ecosystem and entrepreneurial identity, they can strategically navigate their entrepreneurial journeys. The

findings of the study may help increase the awareness and empowerment for women entrepreneurs (Neumeayer, Santos and Morris, 2019). Creating awareness of the ecosystem and its antecedent challenges and opportunities may allow women entrepreneurs the chance to navigate the landscape effectively. Furthermore, the findings of the study may enable women entrepreneurs the opportunity to strategically adapt their business practices. Notably, the study's exploration of the moderating role of entrepreneurial identity can validate and bolster the experiences of women entrepreneurs. It emphasizes the importance of having a strong entrepreneurial identity and provides guidance on how to develop it, leading to increased confidence and resilience.

1.6 Scope and delimitations of the Study

The study aims to investigate the relationship between Ghana's entrepreneurial ecosystem and the entrepreneurial performance of women entrepreneurs, while also examining the moderating effect of entrepreneurial identity on this relationship. The scope of the study is focused on women entrepreneurs in Ghana, specifically those who have been operating their businesses for at least two years. Ghana presents a compelling context for studying women entrepreneurship due to its unique socio-economic landscape. Despite women constituting approximately 46.4% of business owners in Ghana (Hill *et al.*, 2023), they face distinct challenges including limited access to finance, cultural barriers, and institutional constraints (Dzomonda and Fatoki, 2019). Ghana's rapid economic growth and emerging entrepreneurial ecosystem make it an ideal setting to examine how women navigate business opportunities while confronting traditional gender roles. Understanding women entrepreneurship in Ghana is crucial as it represents a significant driver of economic development, poverty reduction, and gender equality in Sub-Saharan Africa (Gough and Langevang, 2016a; Kimbu *et al.*, 2021). The study collects data from a sample of women entrepreneurs across various sectors within the Greater Accra Region, through a structured questionnaire. The selected instrument

assesses the perceived support from the entrepreneurial ecosystem, the entrepreneurial performance of the women-owned businesses, and the entrepreneurial identity of the women entrepreneurs. This process is discussed in details later on the methodology chapter.

However, the study has certain delimitations. First, it focuses solely on women entrepreneurs in Ghana, and the findings may not be generalizable to other countries or contexts. Second, the study relies on self-reported data from the women entrepreneurs, which may be subject to bias. Third, the study is cross-sectional in nature, capturing data at a single point in time, and may not account for changes in the entrepreneurial ecosystem or entrepreneurial performance over time.

Despite these delimitations, the study has the potential to provide valuable insights into the factors that influence women's entrepreneurial success in Ghana and to inform policies and interventions aimed at supporting women entrepreneurs in the country. The findings may also have implications for research on women's entrepreneurship in other developing country contexts.

1.7 Chapter Disposition

The thesis is in seven chapters. Chapter one provides a general introduction to the study, with a background, problem statement, goals and objectives, research questions and significance of the study. Empirical literature is detailed in chapter two, with focus on the individual constructs and how they relate to each other in line with the objectives of the study. Theories related to the study as well as hypotheses development and justification are presented in chapter three. Chapter four details the methodology for the study and includes the design for the study, instruments used for data collection, data collection procedure, ethical clearance procedures and the study area. Data analyses and presentation of results are captured in chapter five of the study. The results from the data analyses are discussed in detail in chapter

six. The last chapter (chapter seven) provides the summary, conclusion and implications of the study, as well as contributions of the research.

Chapter Summary/ Conclusions

The chapter one of the study presents a broad overview of the study. This study is particularly relevant given the impact of the COVID-19 pandemic on businesses, especially women-owned businesses. The study highlights that while women entrepreneurs in Ghana show high early-stage entrepreneurial activity (36.5% TEA), exceeding both regional (26.4%) and global (10.2%) averages, they face significant challenges. These include gender norms, limited access to finance, education barriers, and complex regulatory environments (GEM, 2022). The study addresses key literature gaps: insufficient research on how barriers can create opportunities, limited quantitative studies using advanced techniques like PLS, and the unexplored role of entrepreneurial identity as a moderating variable in developing economies. The research aims to investigate the entrepreneurial ecosystem's effects on women entrepreneurs' performance and examine how entrepreneurial identity moderates this relationship. The findings hold significance for academics, policymakers, practitioners, and women entrepreneurs, potentially informing policies and interventions to support women-owned businesses in Ghana and similar contexts.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the review of literature related to the purpose of the study. The review includes an overview of the various scholarly definitions of entrepreneurial ecosystems, the origins of the entrepreneurial ecosystem, critical success factors in the entrepreneurial ecosystem as well as related empirical studies that have explored the entrepreneurial ecosystem relative to women entrepreneurs.

2.2 Defining entrepreneurial ecosystems

Entrepreneurial ecosystems in recent times have received much attention due to the continuous scholarly works in literature (Shwetzzer, Maritz and Nguyen, 2019; Kansheba, 2022; Stephens *et al.*, 2022; Chong and Ren, 2024; Herzog, Mason and Hruskova, 2024; Seun, Adigun and Olusola, 2024). These studies have lent credence to the importance of entrepreneurial ecosystems. However, despite its popularity and importance among researchers and practitioners, there is no widely accepted definition of an entrepreneurial ecosystem in the research domain (Spigel, 2020; Stam and Van de Ven, 2021; Muldoon *et al.*, 2023); implying a lack of consensus. This could be due to its (entrepreneurial ecosystems) emergence from different origins or because "ecosystems are defined in different ways, at different scales, and with different research designs and data" (Malecki, 2018). Drawing on Shane and Venkataraman, (2007a) who state that entrepreneurship cannot exist without entrepreneurial opportunities, Stam and van de Ven (2021) report that the entrepreneurial ecosystem is composed of two separate words; entrepreneurial and ecosystem.

The first component, entrepreneurial, refers to “situations in which new goods, services, raw materials, and organisational methods can be introduced and sold at a higher price than their cost of production” (Shane and Venkataraman, 2007a). The second component, ecosystem, is a word that emerged from biology and describes the interaction of living organisms and their environment. Purbasari, Muhyi and Sukoco (2020) comprehensively describe the ecosystem concept from biology as "the natural environment and its elements, including living organisms (biotic factors) in an area as well as the physical environment (abiotic factors), which function together as a single unit". In terms of applying this biological phenomenon to business research, an entrepreneurial ecosystem includes the surroundings, entrepreneurs and their businesses as living organisms. This view from biology explains the complex relations and interdependencies which shape entrepreneurial ecosystems (Brown and Mason, 2017a). The entrepreneurial ecosystem represents a form of social interaction that occurs continually. It also represents an understanding of a combination of elements that are crucial for entrepreneurship (Ratten and Jones, 2021). Table 2.1 below is a presentation of some proposed definitions of an entrepreneurial ecosystem.

However, one of the most widely accepted definitions of the concept has been proposed by (Colin and Brown, 2014) as:

A set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organizations (e.g., firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g. the business birth rate, numbers of high growth firms, levels of ‘blockbuster entrepreneurship’, number of serial entrepreneurs, degree of sellout mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment.

Table 2.1: Definition of terms

Author (s)	Definitions
(Spilling, 1996:91)	“Entrepreneurial ecosystems are the complexity and diversity of actors, roles and environmental factors that interact to determine the entrepreneurial performance of a region or locality”.
(Cohen, 2006:3)	“An interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures”
(Stam and Spigel, 2016)	Entrepreneurial ecosystem as “a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory”.
(Spigel, 2017:2)	“Entrepreneurial ecosystems are combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative start-ups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures”
(Mujahid, Mubarik and Naghavi, 2019)	An entrepreneurial ecosystem is defined by researchers as a collection of organised and interdependent factors that lead to the formation of a stimulating environment for entrepreneurial activities in a country.
(Shwetter, Maritz and Nguyen, 2019:79)	...as "a set of interconnected entrepreneurial actors, organisations, institutions, and entrepreneurial processes, which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment, involving a dynamic and systemic nature, within a supportive environment”
(Jones and Ratten, 2021:2,3)	"The concept of an entrepreneurial ecosystem implies some form of social interaction that occurs continually". “Entrepreneurial ecosystems represent a way to understand the combination of elements required for entrepreneurship to exist in a designated space”
(Stam and Van de Ven, 2021:810)	“Entrepreneurial ecosystems are systems that produce successful entrepreneurship, and where there is a lot of successful entrepreneurship, there is apparently a good entrepreneurial ecosystem”
(Bendickson <i>et al.</i> , 2021:2)	... “entrepreneurial ecosystem as the social and economic environment affecting local or regional entrepreneurship”

Source: (Fubah and Moos, 2021)

Most definitions of entrepreneurial ecosystem from the above table are centred on characteristics that include combinations (Jones and Ratten, 2021), interactions (Spilling, 1996; Jones and Ratten, 2021), collections (Mujahid, Mubarik and Naghavi, 2019), interconnectedness (Cohen, 2006b), systems (Stam and Van de Ven, 2021) and interdependencies (Stam and Spigel, 2016; Mujahid, Mubarik and Naghavi, 2019) which exist between the components of the entrepreneurial ecosystem. Ignoring these characteristics may be detrimental to the success of the entrepreneurial ecosystem (Isenberg, 2010).

2.3 Origins of the Entrepreneurial Ecosystem

The notion of entrepreneurial ecosystems, although relatively new in terms of popularity, is rooted in a diverse intellectual tradition that covers disciplines such as clusters, innovation systems, and urban economics (Acs *et al.*, 2017; Brown and Mason, 2017b; Malecki, 2018; Brown, Mawson and Rowe, 2019). The origins of entrepreneurial ecosystem thinking may be traced back a hundred years to Marshall (1920), who examined the elements that spurred businesses in particular geographical regions referred to as industrial districts (Cantner *et al.*, 2021). Further studies have built upon the concept of Marshallian industrial districts by examining national systems of innovation (Freeman, 1995; Lundvall, 1992), learning regions, and the Triple Helix model (Schmutzler, Pugh and Tsvetkova, 2022). Subsequently, there was a significant amount of research conducted on regional clusters (Delgado, Porter and Stern, 2010) and regional innovation systems (Cooke, 2007). Although these approaches may vary in their goals, techniques, and epistemological perspectives on the economy, they all agree on the fundamental concept that there are external elements inside a certain area that enhance a company's competitive advantage (Spigel and Harrison, 2018).

The notion of entrepreneurial ecosystems presents two notable improvements in comparison to current methodologies in the domain. Primarily, it redirects the study emphasis from overall new venture formation and innovation to productive entrepreneurship, hence

realigning studies on entrepreneurship and economic development. Productive entrepreneurship encompasses entrepreneurial endeavours that directly or indirectly contribute to the overall production of the economy or enhance the ability to generate further output (Baumol, 2004). High-growth enterprises are frequently employed as a substitute for productive entrepreneurship (Bosma *et al.*, 2018), as they contribute significantly to the creation of new jobs in developed economies, making them an essential focus for economic development policies (Brown and Mason, 2017b). Productive entrepreneurship refers to the involvement of creative companies and entrepreneurial personnel who contribute to the overall productivity of the economy (Stam, 2014). Cluster and regional innovation system theories have long seen entrepreneurship as secondary to their primary emphasis on prominent manufacturing or multinational corporations.

Prior studies have briefly addressed the establishment of new companies in relation to this subject matter, although they have seldom prioritized the aspect of productive entrepreneurship. Similarly, the existing research on entrepreneurial environments has recognized the impact of the wider context on entrepreneurs (Doroudi, 2017). However, this research has mainly concentrated on various types of entrepreneurial activities, which often involve low-growth entrepreneurship and have limited overall economic influence (Welter, Baker and Wirsching, 2019). The examination of entrepreneurial ecosystems signifies a change in the analytical emphasis from a region's overall number of new businesses or its socio-economic traits to a more precise type of entrepreneurial activity, namely productive entrepreneurship, and the individuals and elements that impact it (Isenberg, 2011). In recent times, there has been an additional growth in the field of entrepreneurship, which now encompasses social entrepreneurship. This acknowledges the wider impact of entrepreneurship on society, going beyond just economic factors (Harms and Groen, 2017; Thompson *et al.*, 2022; Shepherd and Patzelt, 2023). By prioritizing productive

entrepreneurship in research objectives, scholars can thoroughly examine the interconnectedness within networks that influence the generation of new values, both at the firm level and in the wider economy. By narrowing the emphasis, it becomes possible to conduct more exact examinations into the specific organisational traits and regional elements that contribute to the success of scalable entrepreneurial endeavours. Although there has been significant research on certain aspects of scaling in entrepreneurship, such as venture capital investment, other areas have not been given as much focus.

The utilization of the entrepreneurial ecosystem approach allows for the integration of diverse theoretical frameworks and scientific fields, enabling researchers to examine a fundamental inquiry in social science: the interaction between individual initiative and social and economic frameworks in economic endeavors (Stam, 2014). This approach highlights the significance of entrepreneurs as leaders in organizations, innovation, and communities. It acknowledges their ability to challenge established systems and create new opportunities based on their unique qualities and situations. Furthermore, various stakeholders in the entrepreneurial ecosystem, including investors, civil servants, and employees, also have the ability to make independent decisions regarding their involvement in the ecosystem. They can utilise resources offered by external systems such as supply chains, platforms, or clusters (Auerswald and Dani, 2022). It is crucial to acknowledge that the factors causing the development of regional entrepreneurial ecosystems may vary from those seen in other models of innovation in specific areas (Spigel, 2017b).

Entrepreneurial ecosystems promote a fresh curiosity in comprehending the specific conditions that facilitate entrepreneurship while acknowledging the influence of entrepreneurial individuals in shaping and changing their surroundings. This has resulted in a dynamic research environment that incorporates many research methodologies and is influenced by recent policy measures undertaken globally. According to proponents,

ecosystem policy can be seen as a "New Industrial Policy" (Elia, Gatti and Margherita, 2020). Nevertheless, it is imperative to thoroughly analyze this nascent research and methodology in policymaking to determine the current knowledge and uncover any existing limitations and deficiencies.

2.4 Critical success factors to the entrepreneurial ecosystem

Entrepreneurial ecosystems (EEs) exhibit localized dimensions that are influenced by factors such as proximity, institutions, culture, and networks (Stam and Spigel, 2016). Similar to triple helix constellations, EEs have boundaries within which knowledge flows more rapidly and at lower costs compared to outside these boundaries (Asheim, Hansen and Isaksen, 2022). This facilitates faster innovation and adaptation by firms (Georgina M Gómez, Manya and Fransen, 2023). (Isenberg, 2010, 2011) identified six key factors for the success of an EE, which were later supplemented by three additional factors suggested by the World Economic Forum (WEF, 2013). Mazzarol *et al.* (2020) and Clark and Pidduck (2023) integrated these factors into a circular representation.

Government policy plays a crucial role in EE development and can refer to both national and sector-specific policies. Mazzucato (2011) argues, for instance, that Silicon Valley's growth would not have been possible without the entrepreneurial efforts and investments made by the State of California in risky research endeavors. While many governments in the global South actively support EEs, such levels of support are rare. Additionally, policies related to informal firms vary widely (Vega-Gómez *et al.*, 2020). For women entrepreneurs to make progress and improve their performance in the ecosystem, it requires governments to support diversity (Park, Yang and Kim, 2020) and networking (Scott, Hughes and Ribeiro-Soriano, 2022). However, with little government supports in emerging economies in terms of women entrepreneurs, it remains unclear how dynamic women businesses emerge and thrive without the governmental support.

Regulatory frameworks and infrastructure significantly impact the micro-level of the economy through elements like taxation, licensing, security, subsidies, and infrastructure provision (Isenberg, 2010; Spigel, 2017b; Kuckertz, 2019; Szerb *et al.*, 2019). In the global South, regulatory frameworks and infrastructure that reduce business uncertainty are less common. In the absence of supportive government policies, non-governmental actors and intermediary organizations may step in to facilitate self-organized interactions (Salinas and Muffatto, 2017; Ault and Spicer, 2022).

When it comes to finance and funding in the entrepreneurial ecosystem (EE), larger companies often rely on formal banks and equity, while small and medium-sized enterprises (SMEs) and informal firms typically prefer personal resources and informal loans (Akintimehin *et al.*, 2019). In the global South, access to finance within the EE is often more dependent on networks, highlighting the importance of relationships.

Culture plays a significant role in shaping the entrepreneurial landscape. Cultures that normalize entrepreneurship are more likely to promote it, whereas cultures that view entrepreneurship as a last resort tend to discourage it (Muñoz *et al.*, 2022). Moreover, culture fosters trust and reciprocity, which are crucial for firms to cope with challenges and drive innovation (Fransen and Helmsing, 2017).

Mentors, advisors, and support systems play a vital role in the EE by disseminating information and providing various services such as business incubation, acceleration, legal support, and mentoring (Spigel, 2017b). In tech communities, hubs are common models that promote innovation for technology-based companies. These hubs serve as platforms for individual technologists, entrepreneurs, and freelancers to network, innovate, and start businesses (Friederici, 2016).

Local universities play a significant role in generating and disseminating knowledge to stimulate innovation and cultivate skills (Feld, 2020). However, the potential of universities to support startups can vary in different contexts (Oluwatobi *et al.*, 2019). In an EE, universities contribute to the national innovation system by introducing global knowledge to the local environment (Scerri, 2020).

Education and training are crucial for fostering entrepreneurs and equipping workers with the skills to support innovation and startups. While formal educational institutions provide general skills, apprenticeships and on-the-job learning play a significant role in EEs with high levels of informality (Pita, Costa and Moreira, 2021). In the global South, EEs may rely more on self-organized mechanisms for education, training, and support.

Human capital, encompassing the knowledge, skills, and abilities of the population, is essential for supporting entrepreneurship (Mazzarol, 2014). High levels of human capital among workers, consumers, suppliers, and other actors within the sector and region are crucial for driving innovation and creating learning regions where ideas can emerge from anywhere (Huggins, Waite and Munday, 2018; Diebolt and Hippe, 2022).

Access to markets and business connections is ultimately necessary for economic growth. In Silicon Valley, this includes access to the US military as a significant local buyer, while firms also engage with global value chains (Gereffi, Humphrey and Sturgeon, 2018; Collin, Sandström and Wennberg, 2022). In the global South, an EE is likely to combine market knowledge from global buyers with insights from local networks (Fransen and Helmsing, 2016).

2.5 Related studies on entrepreneurial ecosystems

There is a noticeable research gap in the understanding of how macro-level crises affect investors' funding decisions regarding female entrepreneurs. Drawing on role congruity

theory and the literature on crisis and strategic decision-making, the researchers Yu *et al.* (2024) propose that macro crises have the potential to challenge the perceived incongruity between traditional stereotypes associated with the female gender role and the entrepreneurial role, thereby influencing investment decisions for female entrepreneurs. They assert that the altered perceptions of gender role incongruity serve as a critical underlying mechanism driving these results. Scholars (Gonçalves *et al.*, 2024) employed the case study method with a process data approach, focusing on two Latin American cities, Porto Alegre and Florianópolis to shed light on fostering and developing innovation and entrepreneurial ecosystems in cities from the institutional work perspective, emphasizing the need to institutionalize collaboration.. These cities were chosen due to their cultural context characterized by a lack of cooperation. The findings of the study revolve around the institutionalization of collaboration in the development of innovation and entrepreneurial ecosystems, which unfold in three phases involving three groups of roles: leaders, supporters, and the community. In the first phase, referred to as "Preparing for Collaboration," the practices are associated with the leader's group. The second phase, "Strengthening Collaboration," expands the practices and shifts the focus to the supporter's group. The third phase, "Disseminating Collaboration," further broadens the scope and becomes crucial for the community's group. The evolution of these phases is closely tied to the expansion of institutionalization practices and a focus on the most active roles. The results of the study have significant implications for both the theory and practice of innovation and entrepreneurial ecosystem emergence. They provide insights into the critical phases and roles necessary for fostering innovative environments. The influence of a region's vulnerability on the perceived level of support for social entrepreneurship from the perspective of a social entrepreneurial ecosystem was explored by Villegas-Mateos and Vázquez-Maguirre (2024). The study focused on social entrepreneurial ecosystems (SEEs), which have the potential to

support high-impact entrepreneurs but are not extensively explored in upper-middle-income countries. The study employed a combined macro-level (countries) and meso-level (vulnerability regions) analysis to gain a better understanding of how national policies may impact the perceptions of different regions and, consequently, sustainable economic development. The researchers utilized principal component analysis and non-parametric statistics to compare the means of countries and the levels of vulnerability in regions. They gathered data from Chilean experts (n = 276) and Mexican experts (n = 188) based on the Global Entrepreneurship Monitor's regional data. At the macro level, the results revealed that experts in Chile had a more positive perception of social policies supporting social entrepreneurship compared to their counterparts in Mexico. At the meso-level, experts in high-vulnerability regions exhibited a stronger perception of social ecosystem dynamism compared to those in low-vulnerability regions. These findings contribute to the ongoing discussion on the need for strategies that promote greater impact and sustainability in upper-middle-income countries and their respective regions.

An exploratory analysis on the impact of the entrepreneurial ecosystem on opportunity-driven senior entrepreneurial activity in Latin America was carried out by Torres-Marín *et al.* (2024). The researchers utilized data from the Global Entrepreneurship Monitor and the Global Entrepreneurship and Development Institute, focusing on five Latin American countries: Argentina, Brazil, Chile, Colombia, and Mexico. The dataset included 15,019 observations of individuals aged 50 years and older, spanning the years 2013 to 2017. A multi-level logistic regression model was employed to estimate the relationship between the total entrepreneurial activity by opportunity among seniors and various EE indicators. Three equations were estimated based on the provided dataset. The findings of this research confirm the significance of certain elements of the EE in influencing senior entrepreneurship in Latin America. It was observed that entrepreneurial attitudes have a positive association with senior

entrepreneurs, leading to higher levels of entrepreneurial ventures. Moreover, the combination of institutions that support these attitudes within the EE has a reinforcing effect on senior entrepreneurial activity. The study also demonstrates that a higher level of entrepreneurial education at post-school stages plays a crucial role in fostering senior entrepreneurial activity.

Hartman and Kear (2024) opined that there has been a significant growth in the literature on entrepreneurial ecosystems (EEs) over the past five years as the concept of EE has been widely used as a framework to understand regional clusters of entrepreneurship. To support this argument, the authors differentiate between two types of EEs: niche EEs (NEEs) and growth EEs (GEEs). This differentiation is based on the distinct networks of actors and institutions that form each type of EE, as well as their differing relationships with growth, productivity, entrepreneurial subjects, global and local scales, and financial ecologies. The authors contend that EE research has predominantly focused on GEEs while neglecting NEEs. By broadening the concept of EE, they aim to address shortcomings in the treatment of small businesses, financial relationships, social differences, and urban politics within the EE literature. Drawing on the existing EE literature and interviews conducted as part of a case study in Boston, the authors demonstrate that the infrastructure of GEEs and NEEs serves not only fast- and slow-growing businesses, respectively, but also reinforces social and economic disparities. While NEEs do allocate resources to marginalized entrepreneurs, these resources primarily focus on business development and have only indirect connections to the needs of marginalized communities and equitable overall development.

Drawing from resource dependency theory, Weerasekara and Bhanugopan (2023) explored the interdependent nature of factors within sustainable entrepreneurial ecosystems and the mediating role of local culture in entrepreneurial action. The authors collected data from 12 entrepreneurial ecosystems in Australia and developed a model to understand the

interdependencies among the factors within these ecosystems. The data were gathered through an e-survey administered to Small and Medium Enterprise (SME) owners in New South Wales, Australia. To analyze the data, the authors utilized the partial least squares structural equation methodology to assess the structural models, validate the outer models, and examine the inner model. The findings of the study provide empirical evidence supporting the existence of sustainable entrepreneurial ecosystems. The study highlights that the environment in which sustainable entrepreneurial ecosystems develop plays a significant role in their functionality. Additionally, entrepreneurial culture was found to mediate the relationship between other ecosystem factors.

Scholars Harris and Menzel (2023) opined that the entrepreneurial ecosystem concept has gained substantial popularity as a policy tool for regional development. However, it has received limited critical engagement within the field of economic geography. The authors argue that economic geographers should pay attention to the entrepreneurial ecosystem concept for two main reasons. Firstly, it represents a shift in spatial socio-economic organization that has not been thoroughly explored by economic geographers. Secondly, the concept is inherently complex and requires further conceptual development, particularly in relation to the cluster concept. The entrepreneurial ecosystem concept is considered a close relative and potential successor to the cluster concept, which gained significant policy attention despite concerns over its conceptual clarity. The authors highlight the similarities and intersections between the two concepts, suggesting that economic geographers can contribute to academic debates and policy decisions by examining these connections and enriching regional development literature. In another study by Wube and Atwal (2023), the authors propose a novel approach to examining the political and legal aspects of the entrepreneurial ecosystem as the governing factors for other components of the ecosystem in a country. The study focuses on the integrated effect of the political-legal subsystem on the

performance of Micro and Small Enterprises (MSEs) in Africa, with a specific focus on Ethiopia. The researchers conducted a survey using a proportional stratified sampling method, selecting a total sample of 499 MSE operators from the manufacturing, construction, and urban agriculture sectors in three metropolitan cities of the Amhara National Regional State in Ethiopia. The findings indicate that the political and legal aspects of the entrepreneurial ecosystem have a significant impact on both the entrepreneurial competency and the performance of MSEs. However, the relationship between entrepreneurial competencies and MSE performance was found to be insignificant. The study suggests that government policies designed for MSEs should be practical and appealing, including the provision of various incentives. Furthermore, the authors recommend further research to clarify the contradictions found regarding the relationship between entrepreneurial competencies and SME performance.

Entrepreneurial ecosystems according to Ancona *et al.* (2023) are environments that facilitate the seamless operation of entrepreneurs, firms, and governments, ultimately contributing to innovation and economic growth. The authors address the need for understanding the structure of such ecosystems and propose seven network-based principles that associate specific network metrics with distinct structural features of entrepreneurial ecosystems. Their aim is to support the measurement of the structural characteristics of an entrepreneurial ecosystem and guide policy interventions when certain properties are not met. To illustrate their methodology, they apply it to an original network constructed from Twitter interactions among 612 notable start-ups from seven European countries. This approach represents a novel way of conceptualizing entrepreneurial ecosystems, taking into account online interactions. The results suggest that the analyzed network exhibits some characteristics of an ecosystem, providing evidence for potential policy recommendations. Beishenaly and Dufays (2023) explore the development of agricultural cooperatives in Kyrgyzstan from an

entrepreneurial ecosystem perspective. They highlight the significance of cooperatives in the Kyrgyz government's agricultural development priorities but note that these cooperatives face challenges in the smallholder economy. The authors view agricultural cooperatives as a form of rural entrepreneurship and seek to contribute to the understanding of factors that support cooperatives in developing countries by adapting the entrepreneurial ecosystem framework. Through content analysis of publications from various sources, including the government, cooperatives, unions, and international organizations, they identify five main dimensions of the cooperative entrepreneurial ecosystem: policy and regulatory framework, education and skills, market environment, culture, and networks. The study reveals that while the overall structure of cooperatives' entrepreneurial ecosystems may resemble that of conventional enterprises, there are significant differences in the sub-elements for cooperative enterprises (Beishenaly and Dufays, 2023). This research provides insights for cooperative development policies and practices in post-socialist developing contexts.

Carrick (2023) addresses the need for studying entrepreneurial ecosystems in rural, regional, and development contexts, as previous research has primarily focused on urban centers in developed nations. In these settings, ecosystems are characterized by the heightened importance of environmental and social factors. The paper documents lessons from participatory development and economic planning in the Galapagos, where the interplay between social, economic, and ecological factors is critical. Through a qualitative case study approach, the author elaborates on theory using empirical data from the Galapagos. The reconstructed theory demonstrates that in participatory development contexts, the entrepreneurial ecosystem serves as a space where competing interests contrast and conflict. The study highlights local actors' ability to influence policy during collaborative planning processes in the Galapagos and emphasizes the need for a more nuanced understanding of interactions within entrepreneurial ecosystems that consider the tensions between the

economy, environment, and society. Pierre *et al.* (2023) discuss a unique experience in Northern Haiti, where an innovation hub called the City of Knowledge has been established. Central to this hub is the Institute of Science, Technology and Graduate Studies of Haiti (ISTEAH), an entrepreneurial university that aims to leverage science and technology for national development. The university is in the process of creating an entrepreneurial ecosystem centered around an incubator-accelerator, collaborating with students, graduates, and young individuals from across the country to foster technological and social enterprises that generate value, wealth, jobs, and support sustainable development. The article analyzes this experiment and its prospects in light of the sustainable development goals.

2.6 Previous empirical studies on entrepreneurial ecosystem relevant to women's entrepreneurial performance

Entrepreneurship is an essential catalyst for economic growth and societal advancement (Civera and Meoli, 2023). Women's entrepreneurship plays an increasingly significant role in this regard Chauke and Ndaba (2019) but their performance is significantly influenced by the entrepreneurial ecosystem. This section examines the specific elements of the entrepreneurial ecosystem that are crucial for women's entrepreneurial performance.

2.6.1 Empirical review on women-owned businesses and access to finance

The availability of capital is a crucial component of the entrepreneurial ecosystem, as highlighted by (Shema and Mutarindwa, 2017). Research has indicated that female entrepreneurs frequently encounter challenges in obtaining venture capital, leading to a notable impact on their entrepreneurial performance (Marlow and McAdam, 2013a). The disparity in funding between genders is a pervasive problem that necessitates the implementation of various solutions, such as the provision of specific funding opportunities

for enterprises led by women and the adoption of investment practices that promote gender inclusivity.

Loan *et al.* (2023) aimed to identify and evaluate the relationship between factors and the business performance of women-owned small and medium enterprises (SMEs) in Vietnam, focusing on the dimensions of entrepreneurial orientation factors such as innovation, risk-taking, and proactiveness. The study collected data from 350 female entrepreneurs of SMEs in Vietnam using a structured questionnaire. The researchers applied the partial least squares structural equation modeling method (PLS-SEM) to examine the cause-and-effect relationship between exogenous and endogenous variables. The findings revealed that several factors positively influenced the business performance of women-owned SMEs, including the business capacity of owners, the quality of human resources, access to finance, social capital, entrepreneurial orientation, and government policies (Loan *et al.*, 2023). The study also examined the relationship between the three dimensions of entrepreneurial orientation and business performance. Specifically, it found that proactiveness and innovation had a positive relationship with business performance, while risk-taking had a negative impact on the business performance of women-owned SMEs (Loan *et al.*, 2023). The study highlighted the multidimensional nature of entrepreneurial orientation and its differential effects on business performance. However, it acknowledged the need for further research and a comparison with other SMEs to enhance the understanding of the cause-and-effect relationship between exogenous and endogenous variables.

Tundui and Tundui (2020) conducted a study to investigate the performance drivers of women-owned businesses primarily funded through microcredit. They drew on Storey's theory of small business growth and the family embeddedness axiom to examine the factors influencing the performance of microcredit-funded businesses. The study utilized a cross-sectional survey involving 208 women business owners with access to microcredit. Logistic

regression analysis was employed to model the relationship between independent variables and enterprise performance. The study revealed that microcredit plays a significant role in business performance, with the credit amount having the most substantial influence on the enterprise's capital base. However, its effect on profits was found to be insignificant. The possession of business management skills was associated with a higher likelihood of reporting growth in profits. Additionally, younger business owners and necessity entrepreneurs were more likely to report success in their businesses. Other factors such as product cycle, loan use, and family support also had a significant effect on business performance. The findings underscore the importance of microcredit in driving business performance while highlighting the relevance of factors such as skills, age, and family support.

Peng and Adjasi (2022) conducted an empirical study to examine the gender dimension of the impact of formal finance on enterprise performance. While existing literature suggests that formal finance generally enhances firm performance, the authors hypothesized that this effect may vary between firms led by male and female entrepreneurs due to the additional social, economic, and financial constraints faced by the latter, which can undermine their firm performance. However, there is limited evidence on whether a gender gap exists in the effect of formal finance on firm performance, particularly among small household enterprises. To address this gap, the researchers utilized the Ghana Living Standards Survey 2016/2017 dataset to investigate the effect of formal credit on the productivity of male-headed and female-headed non-farm household enterprises in Ghana. The study's findings revealed that formal credit had a positive effect on labor productivity in male-headed enterprises but not in female-headed enterprises. The authors speculated that this result could be attributed to women's relatively lower endowment of conditional factors such as skills, knowledge, experiences, and capabilities.

In her doctoral thesis, Moore (2021) explored the phenomenon of later-life entrepreneurship with a focus on gendered heterogeneity in decision-making. The study employed a qualitative research methodology and conducted semi-structured interviews with 32 individuals over the age of 50 residing in the United Kingdom. The data analysis informed the development of an emergent, dynamic model that conceptualized the gendered aspects of acquiring age capital for venture creation in later life. The model captured triggers, conflicting drivers, enablers, and barriers associated with later-life entrepreneurship, portraying it as a complex and dynamic process rather than a simplistic action. It further elucidated the gendered complexities of motivational triggers, conflicting drivers in the normative environment, and the process of accumulating different forms of capital for venture creation. The work of Moore (2021) made significant contribution by employing three theoretical lenses, showcasing the limitations of relying solely on one theory and highlighting the explanatory power gained from applying multiple theoretical frameworks. The empirical findings offered a nuanced and gendered perspective, identifying distinctive challenges for policymakers and other stakeholders involved in designing business support programs.

The study conducted by Coleman and Robb (2017) unveiled a notable discrepancy in the availability of angel capital for male and female entrepreneurs. It has been suggested that the enhancement of broader and more inclusive networks could potentially contribute to the improvement of women's access to this particular type of funding. One potential limitation of this study is its narrow focus on the US market, which may restrict the generalizability of its findings to other cultural or economic contexts.

2.6.2 The role of education and training in the entrepreneurial performance and success of women entrepreneurs

Education and training have a significant impact on the entrepreneurial mindset and can enhance the performance of women entrepreneurs. The inclusion of entrepreneurial education

has the potential to cultivate a favourable mindset towards entrepreneurship and equip individuals with practical skills in business management.

Manzanera-Ruiz, Namasembe and Barrales Molina (2023) conducted a study to explore the influence of education level on how women entrepreneurs in Uganda define business success. They interviewed 109 female agribusiness entrepreneurs and found that women's definition of business success is intertwined with their level of education. The main definitions of success identified were business performance, economic independence, and family welfare, which could be categorized as practical interests, strategic interests, or a combination of both. The study has practical implications for policies aimed at women's economic empowerment and education, suggesting the need for entrepreneurial training opportunities for women and access to education for children. They also emphasize the importance of gender-sensitive indicators of business success that consider the specific interests of women in different contexts.

Gorostiaga *et al.* (2023) focused on entrepreneurial orientation in the field of education, given its increasing relevance and the promotion of entrepreneurship by the European Union. They aimed to adapt and validate the Entrepreneurial Orientation Scale (EOE) for Basque students and examine its relationship with gender and academic performance. The study included 735 Vocational Training students. The results confirmed the six-factor structure of the original questionnaire through Confirmatory Factor Analysis, demonstrating acceptable levels of internal consistency and temporal stability. The study provided evidence of convergent validity and relationships with other variables such as self-efficacy and personal initiative. It concluded that the EOE-E is a valid and reliable tool for evaluating entrepreneurial orientation in Vocational Training students. Regarding gender differences, males scored higher in competitive orientation, while females outperformed males in learning orientation. Students with higher academic grades showed higher scores in innovation orientation,

proactive orientation, achievement orientation, and learning orientation compared to students with lower academic performance.

Mozumdar *et al.* (2023) indicated that financial capital and education level positively influenced innovative and proactive EO, while financial capital alone influenced risk-taking EO positively. EO, financial capital, business training, and experience directly and positively influenced women's business performance, while barriers in the social environment had a direct negative influence. The study highlighted how women entrepreneurs shape their EO to make a strong contribution to their family livelihood through their business performance.

Scholars (Liao, Nguyen and Caputo, 2022) there is a need for a comprehensive framework that integrates the influential factors of entrepreneurial intention. They conducted a meta-analysis of 89 primary studies with a total sample size of 51,919 to validate their proposed hypotheses. The study drew on the theory of planned behavior and the social cognitive career theory. The results showed that entrepreneurial knowledge influences cognitive antecedents differently in individuals participating in new ventures. Personal attitude and self-efficacy were found to play a vital role in predicting entrepreneurial intention. Additionally, demographic characteristics such as age, gender, and education background were found to moderate the relationship between cognitive antecedents and entrepreneurial intention. The findings have implications for further academic research and the design of effective programs to enhance entrepreneurial behavior.

Dams *et al.* (2022) investigated the impact of entrepreneurship education and training (EET) programs, specifically Accelerators, on startup business performance. They used human capital theory and focused on the differential effect of EET programs on men and women. The study proposed that Accelerators have the potential to produce a more pronounced positive effect on startups founded by female founders due to the different human capital

attributes of female entrepreneurs. The results confirmed that female entrepreneurs who participated in Accelerators had an increased likelihood of receiving venture capital financing compared to their male counterparts.

A study done by Endalew (2020) conducted a study in Gondar city, Northwest Ethiopia, explore the determinants influencing women entrepreneurs' performance in micro and small enterprises. The study employed an explanatory research design and collected primary data through a cross-sectional survey questionnaire. The sample consisted of 180 women entrepreneurs selected using random sampling. The findings revealed that educational level, previous entrepreneurial experience, access to business training, access to finance, access to business information, government support, land ownership, and tax were significant factors in explaining women entrepreneurs' performance. However, age, marital status, access to the market, and access to physical infrastructure were found to be insignificant variables. The study has some limitations, such as using one-time data for certain determinants and a relatively small sample size. The findings have practical implications for policymakers and women entrepreneurs, highlighting the factors that can contribute to improved performance and ultimately benefit job creation, wealth, innovation, and poverty alleviation.

The work of Brixiová, Kangoye and Said (2020) paper aims to reconcile mixed findings in the literature regarding the effectiveness of entrepreneurial training by analyzing the link between training, human capital (including tertiary education and non-cognitive skills), and gender gaps in entrepreneurial performance in Africa. The study found that while financial literacy training directly benefits men, it does not have the same effect on the sales levels of women entrepreneurs. Instead, tertiary education has a direct positive impact on the performance of women entrepreneurs. This suggests that tertiary education can act as a channel that enhances the effectiveness of training. Furthermore, the study found that women entrepreneurs who possess strong non-cognitive skills, such as tenacity, achieve higher sales

performance. The results highlight the importance of including tertiary education and comprehensive entrepreneurial training programs that focus on a balanced set of skills, including non-cognitive skills, in policies aimed at supporting women entrepreneurs.

In the study by Micozzi and Lucarelli (2021), the paper aims to challenge the notion that gender alone explains entrepreneurial outcomes and instead focuses on the influence of gendered motivation in forming and shaping new venture teams. The research model is validated using data from the Panel Study of Entrepreneurial Dynamics II (PSED II), employing a system of simultaneous equations. The study first examines whether team characteristics affect the performance of new ventures and then investigates the determinants of team features, with a particular focus on sex and the motivation of nascent entrepreneurs. The findings suggest that human capital, in terms of education and experience of team members, consistently explains venture evolution when considering the larger team of affiliates. The study argues that the human capital gathered by nascent entrepreneurs is not solely due to gender but is influenced by a gendered motivation related to the differing need for achievement between men and women. The research has limitations concerning the scoring assigned to qualitative data from the PSED II survey but emphasizes the importance of educating women on rebalancing their personal motivation towards entrepreneurship by fostering their incentives for achievement. The paper suggests that political and educational programs could facilitate the success of new businesses led by women.

2.6.3 Studies showing how Social Networks affect gender gaps in the workplace

Social networks are integral to achieving entrepreneurial success. The authors Aldrich and Zimmer (1986) highlight the provision of opportunities for mentorship, knowledge exchange, and access to resources. Nevertheless, female entrepreneurs may encounter challenges in accessing entrepreneurial networks as a result of societal biases and gender-based networking tendencies (Renko, Kroeck and Bullough, 2012). Consequently, it becomes imperative to

further investigates further the factors that influence the development of inclusive social networks of female entrepreneurs.

The study conducted by (Brush *et al.*, 2018) investigated the effects of the gender gap on venture capital accessibility, specifically emphasizing the role of social networks. By conducting a comprehensive examination of investment trends and conducting insightful interviews with female entrepreneurs, the researchers shed light on a significant issue: women entrepreneurs frequently encounter limited access to crucial investor networks as a result of inherent gender biases and systemic obstacles. Nevertheless, it is important to note that the main emphasis of this study was centred around the venture capital context, which may potentially limit its relevance to alternative forms of funding or diverse business sectors.

Guerrero *et al.* (2016) shed light on the pivotal role of universities in serving as entrepreneurial networks that provide support for female entrepreneurship. Based on a comprehensive analysis of multiple universities with entrepreneurial programmes, it has been determined that these institutions have the potential to play a crucial role in fostering the growth of women entrepreneurs. This can be achieved by facilitating their access to valuable networks, resources, and training opportunities. However, it is important to note that the scope of this study may be constrained as it solely concentrates on universities, potentially neglecting other networks that are pertinent to women entrepreneurs.

The study conducted by Balachandra *et al.* (2019) investigates the impact of gender stereotypes on investor decision-making within entrepreneurial networks. The experimental design conducted with investors as participants demonstrated that gender stereotypes have the potential to impede women's access to investment opportunities, even when they possess robust networks. However, the scope of this study is limited to investment and does not explore the various ways in which networks could support women entrepreneurs.

Dennehy and Dasgupta (2017) examined the potential benefits of peer networks for women in traditionally male-dominated fields, such as engineering. During their longitudinal study, the researchers closely observed the experiences of female engineering students who were paired with female peer mentors. The research findings revealed that the existence of a network of female peers can greatly contribute to women's perseverance in fields that are predominantly male dominated. Although this study focuses on education rather than entrepreneurship, its findings may have significant implications for women entrepreneurs working in sectors dominated by men. The authors Gupta *et al.* (2009) conducted a study that examined the impact of gender stereotypes on entrepreneurial intentions. According to their research, it was determined that women who possess supportive networks that encourage their entrepreneurial aspirations demonstrate a higher likelihood of engaging in entrepreneurial endeavours. One potential limitation of this study is its exclusive focus on entrepreneurial intentions, without considering actual entrepreneurial outcomes.

In their study, Hoang and Antoncic (2003) conducted an examination of the significance of network-based resources in the entrepreneurial process. Through the process of conducting surveys and interviews with entrepreneurs, it has been determined that these networks have a substantial influence on the identification of opportunities, acquisition of resources, and establishment of new ventures. However, women faced challenges in accessing these resources as a result of gendered networking patterns. One limitation of this study is its broad scope, as it encompasses entrepreneurs in general rather than specifically focusing on women entrepreneurs.

The objective of Ahl (2019) extensive research study was to gain a comprehensive understanding of the gender perspective within the field of entrepreneurship, with particular focus on the influential role of social networks. Based on an extensive review of literature, Ahl discovered that various societal and institutional factors frequently impede women's

ability to access essential entrepreneurial networks. However, given that this study is conducted as a literature review, it does not incorporate primary data.

The study conducted by Greene *et al.* (2001) offers valuable insights into the impact of gender on venture capital funding. Through the utilisation of a blend of survey and interview methodologies, the researchers have discovered a noteworthy revelation: the acquisition of venture capital is greatly influenced by social networks. Nevertheless, female entrepreneurs frequently encounter a disadvantageous situation wherein they have limited access to such networks. It has been determined that this restricted access significantly hinders women's capacity to obtain essential funding. Notwithstanding these crucial findings, it is important to note that the scope of this research is confined to venture capital funding, thereby restricting its applicability to other forms of funding. Furthermore, its primary emphasis is predominantly on the domestic market of the United States, which may limit its potential for global implementation.

In lieu of employing a primary research methodology, Minniti and Nardone (2007) undertook a comprehensive literature review and meta-analysis to examine the obstacles encountered by female entrepreneurs. This analysis highlights the significant importance of social networks in achieving entrepreneurial success. Moreover, it has been determined that women entrepreneurs encounter systemic disadvantages when establishing these networks as a result of deeply ingrained societal biases and gender norms. While the findings of this study provide valuable insights, it is important to acknowledge a significant limitation related to its reliance on existing research rather than generating original primary data.

The study conducted by Yitshaki and Kropp (2016) provides a more focused examination of the significance of motivations and social networks in the process of opportunity recognition, specifically within the context of social entrepreneurs. The study's qualitative methodology,

which involved conducting in-depth interviews, uncovered compelling evidence that social networks play a crucial role in the process of opportunity recognition. Consistent with previous research, it has been observed that women frequently encounter more pronounced obstacles when it comes to establishing and utilising these networks. These findings contribute to the expansion of our knowledge, although it is important to note that the emphasis on social entrepreneurs may limit their applicability to other entrepreneurial settings.

2.6.4 Supportive Policies and Legal Frameworks

The impact of government policies and legal frameworks on women's entrepreneurial activities is significant (Brush, Linda, Edelman, *et al.*, 2019). Supportive policies may encompass various measures such as tax incentives, grant opportunities, and legislation aimed at promoting equal opportunities for women entrepreneurs. Aidis, Weeks and Anacker (2015) examined the impact of varying regulations in different countries on women's entrepreneurial endeavors. The researchers utilized cross-country regression analysis to compare various regulatory environments and their effects on women's entrepreneurship. The findings of the study highlight the correlation between business-friendly regulations and increased levels of women entrepreneurial activity in various countries. Nevertheless, the cross-sectional methodology employed in the study presented certain limitations, as it may not have fully encompassed the complete spectrum of dynamics within the regulatory environment or accounted for their temporal evolution.

In a study conducted by Dilli, Elert and Herrmann (2018), the researchers examined the gender-specific impacts of social and institutional contexts on women's entrepreneurship with high impact. The study employed a multi-method approach, utilizing surveys and policy analysis, with the objective of assessing the influence of institutions on the prospects for high-impact female entrepreneurship. The results of the study indicated that the presence of

supportive government policies and a commitment to gender equality had a positive impact on women's engagement in high-impact entrepreneurship. However, it is important to note that this study may not comprehensively consider the impact of various external factors, such as societal and cultural norms, on women's entrepreneurship. Sorgner, Bode and Krieger-Boden (2020) investigated the effects of digitalization policies on the field of women's entrepreneurship. An econometric analysis was conducted to examine the correlation between digital policy and entrepreneurial activity related to gender. The study findings indicate that the implementation of government policies aimed at promoting digital literacy and access has the potential to greatly enhance the entrepreneurial performance of women. However, it is important to note that the scope of the study was limited to Europe, which may restrict its ability to accurately represent the worldwide dynamics of digitalization and women's entrepreneurship.

Diaz-Garcia, Jiménez-Moreno and Sáez-Martinez, (2018) conducted a thorough investigation to evaluate the influence of gender equality policies on entrepreneurial activity, encompassing both male and female participants. The main objective of the study was to gain a comprehensive understanding of how these policies impact the entrepreneurial environment. The researchers employed a quantitative methodology, wherein they conducted an analysis of data sourced from the Global Entrepreneurship Monitor and the Social Institutions and Gender Index. The research findings underscored the positive impact of gender equality policies on entrepreneurial activity, with a particular emphasis on the benefits for women. However, it is important to note that this study primarily concentrated on developed economies. As a result, its relevance and applicability to developing or underdeveloped economies may be limited due to potential significant contextual differences.

Additionally, the study conducted by Aparicio, Urbano and Audretsch (2016) examined the impact of institutional factors on entrepreneurial activity, specifically with regards to

women's entrepreneurship. The researchers conducted an analysis utilizing institutional economics theory to examine the influence of formal institutions (government policies and regulations) and informal institutions (societal norms and attitudes) on women's entrepreneurial activity. The study findings indicate that both types of institutions have a significant impact on the promotion or impediment of women's entrepreneurship. This underscores the importance of implementing supportive policies and fostering positive societal attitudes towards women's entrepreneurial endeavours. Nevertheless, the comprehensive scope of the study may inadvertently neglect distinct regional or sector-specific variations in the impact of institutional factors.

In a recent study conducted by Welsh *et al.* (2020) the focus was on examining the impact of government support on women's entrepreneurship within the context of family businesses. The researchers employed a survey methodology to gather data from female entrepreneurs involved in family businesses across multiple countries. The research findings indicate that government support programmes have a positive influence on the success of women entrepreneurs in family businesses. Nevertheless, it is important to note that the emphasis on family businesses in this study may restrict its applicability to other types of entrepreneurial endeavours. The study conducted by (Thébaud, 2015) examined the influence of the institutional context, specifically government policies, on the entrepreneurial intentions of both men and women. The study utilised multi-level modelling techniques to analyse data obtained from the Global Entrepreneurship Monitor (2018). Its objective was to examine the effects of public policies on gender disparities in entrepreneurship. The study revealed that there is a correlation between more egalitarian gender role attitudes and greater welfare state support with a reduced gender gap in entrepreneurial intentions. The primary constraint of the study lies in its reliance on entrepreneurial intentions rather than actual entrepreneurial behaviour, despite offering valuable insights.

In a study conducted by Estrin and Mickiewicz (2011), the focus was placed on examining the impact of institutions on entrepreneurship. These institutions encompassed both formal entities like government policies, as well as informal factors such as social norms. Through a comprehensive analysis of multiple empirical studies, the researchers have successfully identified and established the correlation between institutional transformation and entrepreneurship. The findings of their research indicate that the presence of a well-designed institutional framework, which encompasses supportive government policies, has a substantial impact on entrepreneurial activity. Nevertheless, the comprehensive nature of this review may inadvertently overlook the distinct obstacles encountered by female entrepreneurs.

A comprehensive study conducted by Klapper and Parker (2011) examined the effects of gender-specific government policies on the advancement of female entrepreneurship in 57 different economies. The researchers utilised a blend of country-level data analysis and case studies in order to derive their findings. The study revealed that the implementation of specific governmental policies has the potential to effectively mitigate the gender disparity observed in the field of entrepreneurship. However, the research was constrained by the limited availability and quality of data for certain economies, thereby impeding a fully comprehensive global perspective.

2.6.5 Cultural and Societal Attitudes

The performance of women entrepreneurs can be significantly influenced by cultural and societal attitudes. Gender stereotypes and biases have the potential to impact an individual's confidence, self-efficacy, and willingness to take risks, all of which are crucial factors for achieving success in entrepreneurship. Therefore, it can be argued that by promoting awareness and providing positive role models, societal attitudes can be transformed,

ultimately leading to an improvement in women's performance in the field of entrepreneurship.

ChoudhuryKaul, Supriyadi and Fahlevi, (2023) conducted a study on Muslim Indonesian women entrepreneurs (MIWEs) and their business performance. The purpose of the study was to identify the factors that significantly influence MIWEs' business performance. They surveyed 101 MIWEs and analyzed the results using structural modeling equations. The findings suggest that women business owners' skills and religious factors, within the context of the moderate version of Islam and women's economic engagement, have a significant impact on their business performance. The study found that factors such as the role of the veil, Shariah guidance for business, and managing stress through prayer (Salah) are important for MIWEs. Additionally, the study revealed that MIWEs' effective and participative leadership style, honesty and fairness reputation in business dealings, and a good market image are also significant variables affecting business performance. This contrasts with previous studies that emphasized the influence of environmental factors such as access to capital, family, and government on Muslim women entrepreneurs' business performance.

Sallah and Caesar (2022) aimed to investigate the moderating dynamics of social competence in the relationship between intangible resources and the performance of women-owned businesses in an emerging market context. They conducted an exploratory sequential mixed-method research design, involving qualitative data collected through interviews and quantitative data collected from 264 participants. The study found that social competence plays an important role in the success of women-owned businesses as it influences entrepreneurial interactions and communications. It positively moderated the relationship between organizational reputational capital (RC) and women business growth. However, it

negatively moderated the relationship between human capital, social capital, individual RC, and women business growth. The study suggests that women entrepreneurs need to determine the appropriate level of social competence necessary for sustainable business growth, as utilizing higher levels may involve additional costs and training that may not provide immediate benefits to the business.

Brixiová, Kangoye and Tregenna (2020) highlighted the limited access to finance as a major barrier for women entrepreneurs in Africa. The paper presented a model of start-ups where sales and profits depend on productivity and access to credit. However, due to the lack of collateral assets, such as land, female entrepreneurs face more constraints in accessing credit compared to men. The study tested the model using data from the World Bank Enterprise Surveys in Eswatini, Lesotho, and Zimbabwe and found that land ownership is important for female entrepreneurial performance in terms of sales levels. The results suggest that removing obstacles to female land tenure and enabling financial institutions to accept movable collateral would benefit small Southern African economies. While land ownership is associated with higher sales levels, it is less critical for sales growth and innovation, where access to short-term loans for working capital plays a key role.

Dossou *et al.* (2023) examined how key entrepreneurial orientation (EO) dimensions influence the business performance of young women agribusiness owners in Benin. They collected data from 365 young women agri-food processing business owners and used moderated multiple regression methods to test hypotheses. The study identified three EO dimensions, namely Innovative EO, Pro-active EO, and Risk-taking EO, which positively influenced business performance. The joint effect of EO and the social environment on business performance was not significant, but the business environment negatively moderated

the relationship between EO and business performance. The study also found a three-way interaction between EO, social environment, and business environment, indicating that young women entrepreneurs achieve low levels of performance when adopting EO in social and business environments with high barriers. The study suggests that training young women agribusiness owners on appropriate EO and establishing an innovation platform for joint action plans could enhance their performance. The findings provide insights into stimulating specific EO dimensions for increased economic success of young women agribusiness owners and highlight the conditions for the effectiveness of EO in developing contexts like Benin.

Neneh and Welsh (2022) conducted a study on female entrepreneurs and their contributions to countries' overall well-being. The study aimed to identify the combinations of family support that most effectively enhance business performance. They employed a fuzzy-set qualitative comparative analysis (fsQCA) and analyzed data from 184 technology business owners. The results indicated that high levels of emotional and instrumental support are necessary for female technology entrepreneurs to achieve high firm performance when instrumental support at home is lacking. In contrast, male technology entrepreneurs can still achieve high firm performance even with low emotional and instrumental support for the business. The study contributes to the understanding of women's entrepreneurship in emerging economies, technology entrepreneurs in South Africa, and family and business support systems. The authors also highlight the potential downsides of family embeddedness, particularly how reliance on family financial support can impede the formation of entrepreneurial intentions.

2.6.6 Technology and innovation

Innovation performance is an organization's ability to innovate and generate value through new ideas, processes, products, or services (Sharma, 2019). Innovation is a crucial element of

business sustainability and a source of significant competitive advantage in today's rapidly changing business environments (Fauzi, Sapuan and Zainudin, 2023). It is also the cornerstone of entrepreneurial activities, especially for small and medium-sized firms (SMEs) (Rashid and Ratten, 2022). Despite the undeniable significance of entrepreneurship and innovation to global economies and societies, a noticeable gap exists in research exploring the intersection between innovation and gender (Brush, Linda F Edelman, *et al.*, 2019).

Chávez-Rivera, Ruíz-Jiménez and Fuentes-Fuentes (2023) conducted a study that explores the intersection of gender, context, and innovation performance among women entrepreneurs in Ecuador. Drawing on institutional and upper echelons theories, the study utilized a sample of 45 women entrepreneurs and employed a fuzzy-set qualitative comparative analysis (fsQCA) to identify six different paths to innovation performance. Contrary to initial expectations, the research findings revealed that both institutional and social factors play a significant role in promoting innovation in women-led firms in Ecuador. The study found that establishing close and frequent interpersonal connections and the age of female entrepreneurs facilitated innovation. On the other hand, certain individual variables traditionally associated with innovation, such as education level or prior experience, only appeared sporadically. This research contributes to the discourse on gender and innovation studies by adopting a multilevel approach and providing valuable insights into the contribution of female entrepreneurial leadership to the advancement of developing economies.

Taleb, Hashim and Zakaria (2023) aimed to examine the impact of entrepreneurial resources on micro-businesses and the mediating role of innovation capability in this relationship. The quantitative study collected data from 455 women entrepreneurs in Malaysia using a structured questionnaire. Partial least squares structural equation modeling was employed to test the hypotheses. The results demonstrated that entrepreneurial resources, particularly technical resources, had a positive and significant effect on innovation capability, leading to

enhanced business performance. Additionally, innovation capability was found to mediate the relationship between entrepreneurial resources and micro-business performance. The study contributes to the theoretical understanding by integrating six entrepreneurial resources into a comprehensive framework based on the resource-based view and finance-based theory. The findings support the effects of entrepreneurial resources on the performance of women's micro-businesses and highlight the mediating role of innovation capability. However, the cross-sectional design of the study limited the depth of analysis on relevant themes. This research provides guidance for business managers/owners, decision-makers, and policymakers on adopting and improving entrepreneurial resources to achieve superior performance, competitive advantages, and positive social impacts on employment, gross domestic product, and local communities in Malaysia.

The study by Chávez-Rivera, Ruíz-Jiménez and Fuentes-Fuentes, (2023) analyzed survey responses from 198 male and 188 female entrepreneurs in technology parks across China. The findings showed that women-led firms engaged in open innovation outperformed those led by men. This relationship was strengthened as perceived institutional quality improved. However, when women entrepreneurs were embedded in firms with family involvement, the relationship between open innovation and firm performance dissipated. The researchers attributed this to differences in perceptions of institutional quality and gendered institutions, particularly in China. The study contributes to the understanding of open innovation, family business, and entrepreneurship literature by incorporating gender and gendered institutions as factors that influence entrepreneurs' perceptions of institutional quality and performance outcomes in open innovation activities.

In another study by Expósito *et al.* (2023), the relationship between gender and business performance was explored through the introduction of innovations. The study used a sample of 1376 Spanish small and medium enterprises (SMEs) to analyze the effect of the

entrepreneur's gender on business performance, considering the mediating effect of innovations. The results showed that men-led SMEs were more likely to achieve superior performance from innovations, particularly in implementing process innovations, compared to women-led SMEs. The study acknowledges that its data is cross-sectional, so caution is needed in interpreting causality. The findings highlight the importance of considering gender when enhancing SMEs' innovativeness and performance.

Hashim, Taleb and Faudzi (2023) examined the impact of entrepreneurial bricolage (EB) on micro-business performance (MBP) in Malaysia. The study proposed a moderated mediation model involving innovation capability (IC) and digital marketing capabilities (DMC). The findings showed that IC mediated the relationship between EB and MBP, and DMC moderated the connection between IC and MBP. The study concluded that MBP could be achieved more successfully through the process of EB, IC, and DMC. It contributes to the understanding of the linkage between EB and MBP in micro-businesses and provides insights for various stakeholders involved in micro small and medium enterprises (MSMEs).

A study by Chouksey and Bedarkar (2022) explored the impact of Information and Communications Technology (ICT) usage on entrepreneurial performance and the challenges faced by women entrepreneurs in adopting ICT-based practices in their businesses. The study organized focus group discussions with women entrepreneurs who operated their businesses using ICT. The findings revealed that incorporating ICT-based practices increased profitability, efficiency, and competitiveness while reducing time and costs. The study proposed recommendations for women entrepreneurs to effectively acknowledge and overcome the constraints associated with ICT adoption, emphasizing the potential of ICT for effective financial management.

2.6.7 Women Entrepreneurial ecosystem in Ghana

Recent research on Ghana's entrepreneurship ecosystems highlights a wide range of objectives, findings, and policy implications. Mensah and Amarteifio (2020) investigated Ghana's Central Region's entrepreneurial ecosystem with the goal of identifying factors that influence local entrepreneurs. Their survey of 44 entrepreneurs found moderate satisfaction with demand and raw material availability, but significant dissatisfaction with finance, business development services, and equipment repair. They concluded that, while the ecosystem contributes to entrepreneurship, systemic coordination of interconnected challenges is required for progress. Expanding on this theme, Mensah (2023) investigated gender disparities in Ghana's entrepreneurship ecosystem and critiqued policies using an analytical framework. The study discovered that, despite positive tech sector growth, sociocultural barriers, funding gaps, and inconsistent policies impede women entrepreneurs. It advocated for integrated, gender-sensitive strategies to address systemic inequities and maximise economic potential. Bamfo et al. (2023) proposed an institutional theory-based framework for Ghana's entrepreneurship ecosystem after interviewing 61 entrepreneurs and 19 institutions. They emphasised the importance of ongoing capacity building and government-led stakeholder coordination to strengthen the regulative, normative, and cognitive pillars. Hoffecker et al. (2023) tested an ecosystem-strengthening approach in Accra based on US models and found that online initiatives were less effective than in-person efforts. Asiedu et al. (2019) investigated mobile technology's role in rural micro-entrepreneurships, emphasising its benefits for communication, stock management, and business confidence. Nyadu-Addo and Mensah (2018) evaluated an experiential entrepreneurship clinic at KNUST, demonstrating its effectiveness in training students and promoting venture creation. Zakpaa (2022) examined Ghanaian women's entrepreneurial history, highlighting how macroeconomic and sociocultural factors influence their opportunities and challenges.

These studies emphasise the importance of cohesive policies, gender inclusivity, capacity building, and adaptive strategies in Ghana's entrepreneurial ecosystems to address systemic gaps and capitalise on technological and institutional synergies.

2.7 Entrepreneurial Performance

The concept of women's entrepreneurial performance has garnered significant interest among scholars in the field of entrepreneurship. Numerous studies have been conducted to explore the factors, characteristics, and methods of measuring this performance. Nevertheless, it is important to note that these studies exhibit significant variations in both their findings and methodology, resulting in a diverse yet intricate collection of scholarly works (Marlow and McAdam, 2013b; Namatovu *et al.*, 2019; Zhao *et al.*, 2023). This review offers a comprehensive analysis of the aforementioned studies, with a specific emphasis on the diverse metrics used to assess women's entrepreneurial performance, as well as the identified factors that have been observed to exert an influence on it (Jennings and Brush, 2013; Welter, Brush and De Bruin, 2019b; Dong *et al.*, 2020).

A significant concern within this domain pertains to the measurement of entrepreneurial performance. Common metrics encompass financial performance measures such as profit, sales growth, and return on investment (Welter, Brush and De Bruin, 2019a). However, it is important to note that conventional metrics may not comprehensively evaluate the achievements of female entrepreneurs, as women frequently possess distinct motivations and goals for engaging in entrepreneurial activities in comparison to their male counterparts (Jennings and Brush, 2013). For instance, certain female entrepreneurs place a higher priority

on achieving work-life balance, personal fulfilment, and making a positive social impact, rather than solely focusing on financial gain (Jennings and Brush, 2013). In addition to financial measures, various non-financial indicators have been suggested and employed as performance metrics in studies on women's entrepreneurship. These indicators include job satisfaction, business survival, social impact, as well as market and operational metrics (Starr and Yudkin, 1996; Hughes and Jennings, 2020; Hassan and Ramkissoon, 2023). For the purpose of this study, the women entrepreneurial performance would be proxied by the market and operational performance.

2.7.1 Justification for the use of Market and Operational Research

The utilization of financial metrics, such as profitability and return on investment, has long been a conventional method for assessing entrepreneurial performance. Although these metrics offer valuable insights into the economic well-being of a business, they may not fully encompass the diverse aspects of entrepreneurial performance, particularly when considering women entrepreneurs (Jennings and Brush, 2013; Brush, Linda F Edelman, *et al.*, 2019).

Scholars have posited that women entrepreneurs frequently exhibit distinct motivations and objectives for engaging in entrepreneurship in comparison to their male counterparts (Brush, Linda F Edelman, *et al.*, 2019; Hughes and Jennings, 2020). Certain female entrepreneurs prioritize achieving a harmonious work-life balance, personal fulfilment, and making a positive societal contribution, rather than solely focusing on financial profitability. This implies that it is necessary to broaden the scope of entrepreneurial performance indicators beyond financial metrics in order to encompass the various outcomes that women entrepreneurs may strive for (Starr and Yudkin, 1996).

An alternative strategy involves placing emphasis on both market and operational performance. Market performance metrics, such as market share and customer satisfaction,

offer valuable insights into a venture's competitive standing and its ability to meet customer needs effectively (Edelman *et al.*, 2020). These metrics are of particular relevance to women entrepreneurs, who frequently prioritize relationship-building and customer service in their business strategies (Orser, 2023).

Operational performance, as assessed through metrics such as efficiency, productivity, and innovation, offers a comprehensive view of a business's operations and management. In the context of women entrepreneurs who may encounter unique challenges related to gender, such as societal biases and limited access to resources, operational performance assumes significant importance as it serves as a key indicator of their capacity to effectively utilize limited resources and drive innovation within constraints (Coleman and Robb, 2018; McAdam, 2022). Furthermore, studies indicate that market and operational performance metrics may exhibit a stronger correlation with the sustainable and socially responsible business practices that numerous women entrepreneurs strive for (Meitasari and Furkan, 2021; Renko, Bullough and Saeed, 2021). They facilitate the evaluation of the venture's long-term viability, sustainability, and impact, aspects that are frequently disregarded in conventional financial metrics.

Financial metrics continue to be a significant indicator of entrepreneurial performance. However, it is crucial to acknowledge that relying exclusively on these metrics may fail to consider the varied objectives and strategies pursued by women entrepreneurs. Hence, it is imperative to adopt a more comprehensive approach that encompasses market and operational performance metrics in order to fully capture the intricacies and nuances of women's entrepreneurial performance.

2.7.2 Overview of women entrepreneurial Performance

Chávez-Rivera, Ruíz-Jiménez and Fuentes-Fuentes (2023) conducted a study that explored the intersection of gender, context, and innovation performance among women entrepreneurs in Ecuador. The researchers drew on institutional and upper echelons theories to analyze the data gathered from a sample of 45 women entrepreneurs. The researchers discovered that innovation was facilitated by the establishment of close and frequent interpersonal connections, as well as the age of the female entrepreneurs. In contrast, certain individual variables commonly associated with innovation, such as education level or prior experience, only manifested sporadically. The study's contribution to the discourse on gender and innovation studies lies in its employment of a multilevel approach and its provision of valuable insights into the contribution of female entrepreneurial leadership to the advancement of developing economies. Skaf *et al.* (2024) conducted a study that aimed to investigate the influence of gender diversity and women's empowerment on the performance of family entrepreneurships, with a focus on the moderating role of firm characteristics. The researchers utilized a structured questionnaire as a survey tool to collect data from 91 women managers working in family entrepreneurships in various regions of Lebanon. Several statistical measures, such as the fitness of extracted index, incremental fit-index, non-normal fit-index, root mean square of residuals, and standard root mean square residual, were used to validate the construct. Composite reliability, Cronbach's alpha, and value confirmatory factor analysis were employed to assess internal consistency. The collected data were analyzed using the structural equation modeling method. The findings of the study revealed that gender equality, education level, and family support had a significant impact on women's empowerment. However, no significant association was found between empowerment and earning social status or achieving financial independence. The study also demonstrated a significant interaction between women's empowerment and the performance of family entrepreneurships. Moreover, the results indicated a positive correlation between women

holding managerial positions in family entrepreneurs and firm performance. Finally, the researchers concluded that the location of the family firm acted as a moderator in the relationship between gender diversity and firm performance. Amigot Leache, Carretero García and Serrano Pascual (2023) conducted a study that examined the technologies of the self-employed by young women participating in Spanish entrepreneurial training programs. The objective was to understand how these women navigated the supposed deficiencies associated with female entrepreneurialism and the emotional demands it entailed. The researchers employed a crossed-narrative approach, conducting 14 interviews with program participants and 6 interviews with program trainers across three case studies. The analysis revealed three overarching cultural narratives that shaped the participants' understanding of entrepreneurialism: an epic quest, a vocation or calling, and a pursuit of pleasure. Within these narratives, the participants reinterpreted the relentless efforts required by feminized entrepreneurialism through three moral values embodied by the protagonists of their stories: heroism, sacrifice, and passion. The article also explored the vulnerability of young women to the depoliticization of entrepreneurialism, examining emotional distress, lack of well-being, distancing, ambivalence, and micro resistances as responses to the hegemonic paradigm.

Abdelwahed *et al.* (2023) conducted a study in Pakistan to examine the effect of institutional support (IS) and entrepreneurial knowledge (ENK) on women's entrepreneurial self-efficacy (WESE) and venture performance (VP). The researchers employed a deductive approach and collected cross-sectional data through a questionnaire completed by women entrepreneurs. The study included 324 usable samples, and the results from the structural equation model indicated that formal institutional support (FIS), informal institutional support (IFIS), and ENK had a positive and significant impact on WESE, which in turn influenced VP. The findings of this study provide guidance to policymakers and governments, suggesting that

focusing on women's entrepreneurship by providing entrepreneurship and technical courses can enhance entrepreneurial self-efficacy and improve venture performance. The study also suggests the allocation of financial assistance or funds to women entrepreneurs, which can help address issues such as poverty and unemployment.

Yap, Keling and Ho (2023) conducted a study in Sarawak to explore the factors influencing the entrepreneurial performance of rural indigenous women entrepreneurs (RIWEs). The researchers employed a qualitative approach and collected data through semi-structured interviews with 19 RIWEs in rural areas. Thematic analysis using NVivo software was used to analyze the data. The study found that RIWEs were primarily motivated to start their businesses due to factors such as the desire to succeed, be self-employed, achieve financial independence, and contribute to household income. Important personality traits for entrepreneurial success included self-belief, perseverance, commitment, and risk-taking. Functional competencies and relationship competencies were identified as crucial core competencies for success. External factors such as social networks, financial resources and support, business training and workshops, and government policies favoring RIWEs were found to be important for entrepreneurial success.

Zhao *et al.* (2023) conducted a study in China to explore the influence of the institutional environment on entrepreneurial performance, focusing on the mediating effect of entrepreneurial networks. The researchers utilized institutional theory, social network theory, and survey data from 689 female micro e-commerce entrepreneurs. The results indicated that the institutional environment, encompassing regulatory and cognitive dimensions, positively influenced entrepreneurial performance. The study also found that entrepreneurial networks partially mediated the relationship between the institutional environment and entrepreneurial performance. The findings contribute to the understanding of institutional and social network theories within China's specific social context and provide implications for improving the

performance of female micro e-commerce entrepreneurs by enhancing the institutional environment and establishing entrepreneurial networks.

Bruce, Rooney and Krolikowska (2023) conducted a study to understand the marketing decision-making processes of women microbusiness owners during the COVID-19 pandemic. The researchers conducted qualitative interviews with providers of children's activities who shifted their services online during lockdown. The findings shed light on marketing decision-making by highlighting transitions between causation and effectuation approaches and identifying key resources leveraged in effectuation decision-making. The study also observed the influence of interactions within networks and membership in communities of practice on women microbusiness owners' entrepreneurial marketing decision-making.

Akhter *et al.* (2023) conducted a study in Bangladesh to determine the factors influencing women's entrepreneurial performance in the country. The researchers aimed to contribute to the understanding of women's entrepreneurship and its impact on technological advancement and economic progress. The study employed a quantitative and exploratory approach, utilizing convenience non-probability sampling to identify 250 women entrepreneurs. A questionnaire was developed using Google Forms, incorporating relevant literature on entrepreneurial performance. Email addresses of women entrepreneurial ventures were collected from a digital database to distribute the questionnaires. The researchers used SPSS v26.0 to test the model and validate the hypotheses at a significance level of 5%. Reliability was assessed using Cronbach's Alpha (α), with a value of 0.70 or higher considered acceptable. The findings of the study indicated that entrepreneurial orientation, networking, opportunity identification, economic factors, and socio-cultural factors had a positive and significant impact on women's entrepreneurial performance. These findings can be valuable for governmental bodies, non-governmental organizations, local communities, civil society,

and researchers in formulating effective strategies and policies to foster the growth of women-owned enterprises in Bangladesh.

2.8 Entrepreneur Identity

An emerging area of entrepreneurship research is the study of entrepreneurial identity and how it affects women entrepreneurs' marketing and operational effectiveness. The concept of entrepreneurial identity pertains to the manner in which entrepreneurs perceive themselves in relation to their venture, and how this self-concept impacts their behaviour and decision-making processes (Hoang and Gimeno, 2010; Mei and Symaco, 2022). The seminal work by Fauchart and Gruber (2011) provides valuable insights into the comprehension of entrepreneurial identity. Entrepreneurs have been categorized into three distinct identity types, namely Darwinians, Communitarians, and Missionaries. This classification is based on their self-identification, goals, and motivations. Although the study did not exclusively concentrate on women entrepreneurs, it provided a significant basis for comprehending the influence of entrepreneurial identity on strategic decision-making, encompassing marketing and operational choices.

Research shows an entrepreneur's identity (EI) plays a critical role throughout the entrepreneurial process (Fauchart and Gruber, 2011; Mathias and Williams, 2018). EI encompasses the self-defining characteristics associated with the entrepreneur role, informing decisions, actions and feelings when building a venture (Cardon *et al.*, 2009). EI has been conceptualized in two main ways. From an identity theory perspective, EI represents a superordinate role identity encompassing subordinate identities like innovator, founder and facilitator (Shepherd and Haynie, 2009). Despite recognizing this multiplicity, limited research examines how entrepreneurs manage their multiple role identities, especially post-founding. More work is needed on role identity dynamics and EI beyond start-up (Gruber and MacMillan, 2017). Alternatively, a social identity theory view defines EI through

entrepreneurs' group categorizations and associated motivations and frames of reference (Corbett, Marino and Alsos, 2023). For example, Fauchart and Gruber (2011) typology categorizes founders as Darwinians, communitarians or missionaries based on social motivations. This perspective has informed subsequent EI research (Sieger *et al.*, 2016). In essence, EI has been conceptualized as a unified super-ordinate role identity or a social categorization.

2.8.1 Contextualizing entrepreneurial identity development among women entrepreneurs

2.8.1.1 Entrepreneurial agency and passion

Historically, academic study on entrepreneurship has concentrated on examining the motives behind entrepreneurial behavior. Motivations can be categorized as intrinsic, arising from inherent interest, enjoyment, and benevolence, or extrinsic, influenced by external outcomes such as recognition, financial incentives, and punishment avoidance (Ryan and Deci, 2017). Studies indicate that entrepreneurs find intrinsic joy in skill development and knowledge application, while extrinsic motivations may involve tenure incentives or profit-sharing (Lam and Harker, 2015). Recently, scholars have investigated passion as a strong motivational factor that can elucidate entrepreneurial behavior (Murnieks, McMullen and Cardon, 2019). Business enthusiasm involves a strong motivation and natural tendency towards business endeavors. Studies show that enthusiasm plays a significant role in motivating entrepreneurs to pursue entrepreneurial activities (Huyghe, Knockaert and Obschonka, 2016). The connection between motivation and passion is likely bidirectional. Motivations can spark passion, and the importance of an entrepreneurial identity to one's self-concept can further fuel enthusiasm (Charles Y Murnieks, Klotz and Shepherd, 2020).

2.8.1.2 Liminal competence

An individual's ability to successfully undergo the liminal transition to an entrepreneurial identity depends on their liminal competence - the skills and personal narratives needed to enact the desired identity (Meek and Wood, 2016). Liminal competence is developed through educational and professional experiences like training, unique projects, and varied careers. For example, injured soldiers have drawn from their military knowledge and skills to construct entrepreneurial identities and launch ventures (Shepherd and Haynie, 2011). As an entrepreneurial identity becomes more central, entrepreneurial aspirations strengthen (Farmer, Yao and Kung–Mcintyre, 2011), driving acquisition of associated skills like opportunity recognition, resource leveraging, and business planning (Ibarra and Barbulescu, 2010). In other words, liminal competence enables identity work, which in turn builds expertise. Women entrepreneurs gain competence through industry experience, consulting, entrepreneurship education etc. (Coppens and Knockaert, 2022). Liminal competencies uniquely include narratives and skills that facilitate entrepreneurial identity construction even without engagement. Women entrepreneurs can develop entrepreneurial narratives without being entrepreneurs but need liminal expertise to incorporate that identity. Conversely, lacking exemplary narratives and skills may hinder them from undergoing the liminal transition. Overall, liminal competence enables identity work crucial for successful entrepreneurial role adoption.

2.8.1.3 Social Support

Modern conceptions of identity development emphasize the importance of validation from valued others in progressing through the liminal transition (Ashforth, Schinoff and Rogers, 2016). For instance, recruits affirm their emerging identity as elite paratroopers through social comparisons with peers and mentor assessments (Thornborrow and Brown, 2009). Liminal individuals can also derive support and belonging from those sharing the transitional space (Czarniawska and Mazza, 2013). Conversely, withheld validation from respected

audiences can impede identity advancement (Ibarra-Colado, 2007). For women entrepreneurs, networks tend to lack industry connections, constraining entrepreneurial outcomes (Hayter, 2016). Meaningful links to entrepreneurial peers can enable identity development by providing role models and normative support. However, other academics may discourage commercial activities seen as conflicting with scientific values (Bercovitz and Feldman, 2011). Entrepreneurial laminar lacking shared narratives and supportive *communitas* may experience uncertainty, anxiety and compromised wellbeing (Petriglieri and Petriglieri, 2010). Social barriers are especially daunting for marginalized groups like women and minorities (You, Zhu and Ding, 2017). Family and friends can also provide or withhold critical support (Hahn, 2020). In essence, social validation facilitates, while rejection hinders, progress of the women entrepreneurs.

2.8.1.4 Organizational, institutional, and ecosystem support

Organizational and institutional factors shape the conditions for identity development. Early research framed institutions' role in terms of socializing newcomers into appropriate behaviors, norms, and notions of success (Van Maanen and Schein, 1977). Socialization fosters conformity to identity-related values and adoption of related artifacts, attire and language (Ashforth, Schinoff and Rogers, 2016). It is reinforced through institutional narratives guiding appropriate conduct (Ibarra and Barbulescu, 2010). However, over-socialization can limit identity play and adaptability, while under-socialization breeds insecurity (Thornborrow and Brown, 2009). Ecosystem perspectives highlight the role of interconnected, multi-level institutions and regions in providing entrepreneurial resources (Hayter, 2016). Ecosystems can potentially support women entrepreneurs towards an entrepreneurial identity.

2.9 The argument for a moderating or mediating role of entrepreneurial identity

A moderator is a variable that affects the strength or direction of the relationship between an independent variable and a dependent variable, while a mediator is a variable that explains the mechanism through which an independent variable influences a dependent variable (Baron and Kenny, 1986). In the context of the current study, entrepreneurial identity is more likely to act as a moderator because it is expected to influence how women entrepreneurs interact with and benefit from the entrepreneurial ecosystem, ultimately shaping their performance outcomes. This theoretical rationale aligns with the work of Fauchart and Gruber (2011), who argue that an entrepreneur's self-identification, goals, and motivations shape their strategic decision-making and behaviors.

Another rule of thumb is to consider the temporal precedence of variables. A mediator is typically expected to occur after the independent variable and before the dependent variable in a causal chain (MacKinnon et al., 2007). In contrast, a moderator can occur before, after, or simultaneously with the independent variable (Baron and Kenny, 1986). In the current study, entrepreneurial identity is likely to develop alongside or in response to the entrepreneurial ecosystem, rather than being a direct consequence of it. This supports the idea that entrepreneurial identity acts as a moderator, influencing how women entrepreneurs navigate and benefit from the ecosystem over time. This notion is supported by Mathias and Williams (2018), who highlight the importance of entrepreneurial identity throughout the entrepreneurial process.

A third rule of thumb is to consider the conceptual independence of variables. A mediator is typically expected to be conceptually distinct from the independent and dependent variables, acting as a separate construct that transmits the effect of the independent variable on the dependent variable (Preacher and Hayes, 2008). In contrast, a moderator can be related to either the independent or dependent variable, or it can be a separate construct altogether (Baron and Kenny, 1986). In the current study, entrepreneurial identity is a distinct construct

from the entrepreneurial ecosystem and women's entrepreneurial performance. It represents an entrepreneur's self-concept and is expected to shape how they interact with the ecosystem and achieve performance outcomes. This conceptual independence supports the moderating role of entrepreneurial identity, as evidenced by research on entrepreneurial passion (Murnieks, McMullen and Cardon, 2019) and ecosystem engagement (Hayter, 2016).

Finally, it is important to consider the existing empirical evidence supporting the proposed relationships between variables. While there is limited research specifically examining the role of entrepreneurial identity in the relationship between entrepreneurial ecosystems and women's entrepreneurial performance, existing studies suggest that entrepreneurial identity is more likely to act as a moderator than a mediator. For example, research on social support and validation (Ashforth, Schinoff and Rogers, 2016) suggests that women entrepreneurs with stronger entrepreneurial identities may be more likely to seek out and benefit from the resources and support provided by the ecosystem. This supports the idea that entrepreneurial identity moderates the relationship between the ecosystem and performance outcomes.

In essence, considering the theoretical rationale, temporal precedence, conceptual independence, and empirical evidence, there is a strong case for the moderating role of entrepreneurial identity in the study "The Impact of Ghana's Entrepreneurial Ecosystem on Women's Entrepreneurial Performance: The Moderating Role of Entrepreneurial Identity." The rules of thumb for determining moderating and mediating variables, along with relevant studies and literature, support the argument that entrepreneurial identity is more likely to act as a boundary condition or contingency factor that influences how women entrepreneurs interact with and benefit from the entrepreneurial ecosystem, ultimately shaping their performance outcomes.

Summary of literature reviewed

The literature review provides a comprehensive overview of the entrepreneurial ecosystem concept, its origins, critical success factors, and empirical studies relevant to women entrepreneurs. It discusses how various elements of the ecosystem, such as access to finance (Shema and Mutarindwa, 2017; Loan et al., 2023), education and training (Gorostiaga et al., 2023; Mozumdar et al., 2023), social networks (Guerrero et al., 2016; Brush et al., 2018), supportive policies (Aidis, Weeks and Anacker, 2015; Aparicio, Urbano and Audretsch, 2016), cultural attitudes (Sallah and Caesar, 2022; Dossou et al., 2023), and technology and innovation (Expósito et al., 2023; Hashim, Taleb and Faudzi, 2023), influence the performance of women-owned businesses. The review also examines entrepreneurial identity development among women entrepreneurs, considering factors such as entrepreneurial agency and passion (Murnieks, McMullen and Cardon, 2019), liminal competence (Meek and Wood, 2016), social support (Ashforth, Schinoff and Rogers, 2016), and organizational, institutional, and ecosystem support (Hayter, 2016). Despite the comprehensive coverage of the literature, some gaps emerge. There is limited research on the interplay between various ecosystem elements and their collective impact on women's entrepreneurial performance (Brush, Linda Edelman, et al., 2019). Additionally, insufficient attention has been given to the unique challenges faced by women entrepreneurs in accessing resources and networks within the ecosystem (Jennings and Brush, 2013). The role of entrepreneurial identity in shaping women entrepreneurs' marketing and operational effectiveness has also been underexplored (Fauchart and Gruber, 2011; Mathias and Williams, 2018). Furthermore, there is limited targeted interventions and supports for women owned businesses (Welter, Brush and De Bruin, 2019). The experiences of women entrepreneurs in developing and emerging economies, where cultural and institutional barriers may be more pronounced, have also received limited focus (Yadav and Unni, 2016).

CHAPTER THREE

THEORETICAL REVIEW AND CONCEPTUAL FRAMEWORK

3.0 Introduction

In this chapter, the related theories and conceptual models of the study is presented. The chapter presents reviews on Institutional Theory, the Process Theory and the Resource Dependence Theory. Furthermore, the theoretical bases for relationships between the constructs and the moderating variables are presented and discussed. Following this, the hypotheses are developed and stated. The conceptual framework is graphically presented and explained.

3.1 Theories related to the study

3.1.1 *Institutional Theory* (DiMaggio and Powell, 2000a)

The institutional theory, which was largely established by DiMaggio and Powell, (1983), offers a valuable lens through which to examine Ghana's entrepreneurial environment, the success of women entrepreneurs, and the significance of entrepreneurial identity. There are numerous fundamental principles and critiques of this theory, which emphasize how institutional contexts influence how organizations behave, that are relevant to the research. According to institutional theory, the normative pressures, regulatory frameworks, and cognitive systems present in organizations' institutional settings have a substantial impact on the behavior and features of such organizations (Scott, 2014). In essence, it emphasizes how institutional settings, such as formal norms (laws, regulations), informal norms (cultures, traditions), and symbolic systems (beliefs, values), shape the structures and practices of organizations. According to the theory's proponents, constraints for legitimacy and survival cause organizations to converge over time towards identical structures and practices, a process known as "institutional isomorphism" (DiMaggio and Powell, 2000b, 2000a, 2010).

Meyer and Rowan, (2022) also claim that formal structures are often adopted by organizations in an effort to garner resources and credibility, even when these forms do not improve efficiency.

DiMaggio and Powell (1983) pioneering work has been substantially elaborated upon in subsequent years as scholars have furthered and complicated our knowledge of institutional theory. One of the most significant changes is the increasing attention being paid to institutional complexity, which refers to circumstances in which organizations must deal with several, sometimes incompatible institutional demands (Greenwood *et al.*, 2011). This idea contributes to the understanding of why certain organizations deviate from the isomorphic pattern as propounded by (DiMaggio and Powell, 2000a). According to their strategic goals and the particular institutional context, organizations may selectively submit to certain institutional pressures while rejecting others (Greenwood *et al.*, 2011).

The study of "institutional logics" by Ocasio, Thornton and Lounsbury, (2012) adds even another level to our comprehension of institutional theory. They contend that separate institutional logics, or systems of guiding principles and practices that influence behavior, may be used to characterize various industries or areas. For instance, whereas the institutional logic of the technology sector may place more emphasis on innovation and market competition, the institutional logic of the healthcare sector may place more emphasis on patient care and public service. Organizations and their members are susceptible to simultaneous influence from many logics, which may change their identity and behaviors.

Similar to this, Battilana and Dorado (2010) study focuses on "institutional entrepreneurs"—people or organizations that question and transform current institutions. They contend that the mixed identities that these actors often possess enable them to manage and balance competing institutional demands. This realization could provide light on why

some organizations are more effective than others in bringing about institutional transformation (Voronov and Vince, 2012). Other academics have looked at the function of emotions in institutional processes. They contend that emotions may be a powerful force for institutional change, inspiring group action or affecting how people react to institutional pressures. This body of work emphasizes how crucial it is to take emotional dynamics into account while developing institutional theory.

3.1.1.1 Criticisms of Institutional Theory

Institutional theory has received a number of critiques despite its widespread applicability. According to critics (Hirsch and Lounsbury, 1997), it overemphasizes stability and conformity while downplaying the influence of agency and power on organisational behavior. It has been argued that the concept ignores organizations' ability to challenge or alter institutional influences, a concept known as "institutional entrepreneurship" (Battilana, Leca and Boxenbaum, 2009).

The theory has also come under scrutiny for failing to pay attention to the micro-level mechanisms by which institutional impacts are put into effect (Feldman and Orlikowski, 2011; Barley, 2012; Powell and Colyvas, 2012). Due to this, requests have been made for institutional studies to include additional micro-level components, such as identities and roles (Creed, DeJordy and Lok, 2010; Voronov and Vince, 2012). Voronov and Vince (2012) demonstrate how emotions may alter both individual and group reactions to institutional constraints, while Creed, DeJordy and Lok, (2010) emphasize the relevance of marginalized identities in fostering institutional change. In addition to the usual macro-level emphasis of institutional theory, these fields of inquiry provide a more detailed understanding of how institutions are created and altered.

Despite institutional theory's continuing advancement, some academics have criticized it for undervaluing the influence of personal action and power (Hirsch and Lounsbury, 1997; Suddaby, 2010). This argument contends that conventional institutional theory overemphasizes compliance and undervalues opposition or innovation. Institutional isomorphism gives a limited understanding of why certain organizations stray from the norm, even if it describes how organizations converge in form and behavior.

To fill this void, the idea of "institutional entrepreneurship" (Battilana, Leca and Boxenbaum, 2009) was put out, placing special emphasis on the individuals who actively try to alter their institutional contexts. Although important, this idea may be enlarged to include more complex understandings of power and agency, taking into account elements like the allocation of resources and the systems of authority (Lawrence and Suddaby, 2006).

3.1.1.2 Relevance of Institutional Theory to the Study

Applying institutional theory to research on Ghana's entrepreneurial environment, women's success in the field, and the importance of entrepreneurial identity might provide insightful results. The theory may aid in understanding how the formal and informal institutional components that make up Ghana's entrepreneurial ecosystem influence the conduct and output of women business owners. For instance, laws supporting gender equality in business may help women perform better by legitimizing their entrepreneurial responsibilities. On the other hand, gender-biased cultural norms might hinder their performance by compromising their ability to operate as legitimate businesses.

Additionally, institutional theory may be used to analyze the function of entrepreneurial identity. The idea of "institutional entrepreneurship" may be embodied by women who have strong entrepreneurial identities and are able to defy or alter unfavorable institutional norms. As a result, the relationship between entrepreneurial identity and the institutional

environment may have a substantial impact on how well women in Ghana function as entrepreneurs.

Institutional theory provides an effective lens for examining the entrepreneurial environment and the success of women entrepreneurs in Ghana. The regulatory, normative, and cognitive frameworks that affect organisational behavior and results are all included in the institutional environment (Shane and Nicolaou, 2013). Applying institutional theory to the study, one may argue that legislative frameworks, such as Ghana's laws governing gender equality and entrepreneurship, can have a major impact on how well women do as entrepreneurs. According to existing research (Brush, de Bruin and Welter, 2009), supportive regulatory settings may improve women's entrepreneurship involvement and performance.

Similar to normative and cognitive factors, social views towards women entrepreneurs and cultural norms may have a big impact on how well they do in business. The success of women entrepreneurs may be facilitated by supporting norms and attitudes rather than hindered by unfavorable norms and attitudes (Gupta *et al.*, 2009). Institutional theory may also be used to analyze the idea of entrepreneurial identity, which relates to how much people identify with the job of an entrepreneur. According to institutional theory, the institutional frameworks in which individuals and organizations are enmeshed influence their identities (Ocasio, Thornton and Lounsbury, 2012). The phenomena known as "institutional entrepreneurship" (Battilana, Leca and Boxenbaum, 2009) suggests that women who firmly identify as entrepreneurs may be better able to manage and alter their institutional surroundings.

When considered together, these findings imply that the use of institutional theory might help us understand the Ghanaian entrepreneurial environment, the performance of women entrepreneurs, and the significance of entrepreneurial identity. Researchers may establish a

more complete and contextually rooted knowledge of women's entrepreneurship in Ghana by paying attention to the regulatory, normative, and cognitive factors within this ecosystem as well as the dynamic interaction between these elements and entrepreneurial identities.

3.1.2 Process Theory (Parsons, 1951)

Process theory focuses on the importance of the method, the order of things, or the "how" aspect of a phenomena. The theory has been used to research quite a number of facets of social dynamics, organisational performance, and human behavior (van de ven, 1992). The process theory in entrepreneurship aids in comprehending the entrepreneurial journey from opportunity identification through business setup and development.

Talcott was one of the early proponents who used the process theory to analyze social systems (Talcott and Turner, 2013). Other academics with a strong reputation for their contributions to process philosophy and process theory (Aldrich, 1999; Whitehead, 2010), who emphasized the value of studying entrepreneurial processes and (Sarasvathy, 2001), who established the idea of effectuation, a decision-making process employed by entrepreneurs (Aldrich, 1999; Sarasvathy, 2001; Whitehead, 2010).

According to process theory, understanding the order of events is essential to comprehending the phenomena of interest. The theory examines how actions interact with one another, how they affect results through time, and how they are dynamic (Langley, 1999). The idea emphasizes how crucial it is to study the entrepreneurial process, which includes steps like opportunity identification, appraisal, resource mobilisation, and company development (Churchill and Bygrave, 1989).

The entrepreneurial process begins with opportunity recognition, which also establishes the direction of future actions. It entails identifying market niches, unmet requirements, or emerging trends that might support the development of a brand-new product or service

(Shane and Venkataraman, 2007b). This step is not simple. Ardichvili, Cardozo and Ray (2003) noted that entrepreneurs often use a mix of attentiveness, previous knowledge, and social networks to uncover possibilities. Entrepreneurs evaluate an opportunity's viability and potential profitability after identifying it. In order to decide if the enterprise should be pursued, this assessment is crucial. Market study, competitive analysis, and feasibility studies are often included for entrepreneurs to balance the opportunity's risk and expenses with the possible return (McMullen and Shepherd, 2014).

In order to turn ideas into a workable business, entrepreneurs must mobilize their resources, which is a crucial phase in the entrepreneurial process (Aldrich and Cliff, 2003). A phase that includes the building up of both real resources, such as money and equipment, and intangible resources, such as networks, skills, and knowledge. Due to the "liability of newness," entrepreneurs often have difficulties at this stage. However, good networking and the usage of bootstrapping techniques may help with this process (Freeman, Carroll and Hannan, 1983; Bhide, 1992). The entrepreneurial process culminates the last step, in enterprise formation, when the concept is ultimately given life, which entails beginning commercial operations, obtaining the first clients, and overcoming the first difficulties of managing a start-up company (Reynolds and Miller, 1992). The ability to successfully integrate and coordinate the previously mobilized resources, as well as the capability to adapt and draw lessons from early experiences, are requirements for this stage (Bhave, 1994).

The notion that things are best understood when regarded as processes rather than as static occurrences or outcomes is a key tenet of the process theory. This viewpoint offers insightful understanding into the dynamics, complexity, and contextuality of occurrences. The idea emphasizes the significance of comprehending how entrepreneurial endeavors are born and grow through time in the entrepreneurial setting, illuminating why some businesses succeed while others fail (Sarasvathy, 2001).

The process theory promotes a dynamic interpretation of occurrences, emphasizing the "how" as opposed to the "what." According to this viewpoint, the sequence of actions and events that result in a certain consequence are more important than the outcome itself (van de Ven, 1992). According to process theory, a thorough knowledge of any phenomena can only be attained by an investigation of its processes, complexity, dynamics, and context. This dynamic perspective of processes is essential for comprehending the entrepreneurial journey in the context of business. It emphasizes the idea that effective entrepreneurship involves more than simply the formation of profitable businesses; it also involves a knowledge of the whole entrepreneurial process, from opportunity identification through venture creation and growth (Churchill and Bygrave, 1989).

This viewpoint allows a deeper understanding of why certain businesses succeed while others do not. It highlights the chronological order of business operations, decision-making processes, interactions with their surroundings, and ongoing adaptation to change (Sarasvathy, 2001). For instance, (Aldrich and Cliff, 2003; Shane and Venkataraman, 2007b; McMullen and Shepherd, 2014) all used the process theory to shed light on how entrepreneurs find or create opportunities, assess those opportunities, and decide whether or not to take advantage of them. The main claim of the process theory provides an insightful viewpoint for researching entrepreneurship. It offers deeper insights into why and how certain entrepreneurial initiatives thrive while others fail by changing the emphasis on the journey and the process. This knowledge may be used to better guide tactics and laws that encourage entrepreneurs.

3.1.2.1 Criticisms of Process Theory

Despite offering a thorough understanding of entrepreneurial processes, the process theory has not been exempted from criticism. Some academics contend that the theory's focus on the order of events may ignore other crucial elements like the entrepreneur's personal traits or

environmental effects (Gartner, 2016). According to Gartner (2016), by focusing on the "how" of entrepreneurship, the theory may ignore the "who" of the entrepreneur in terms of unique personal traits, aptitudes, motivations, and experiences. This argument asserts that each of these elements has a substantial impact on the entrepreneurial process. Similar to this, detractors contend that the effect of the larger environment on how the entrepreneurial process plays out may be understated by process theory. Market factors, sociocultural norms, and the regulatory environment all have a significant impact on how entrepreneurial activities are shaped (Low and Macmillan, 1988).

Due to the complexity and dynamic character of the theory, it has also been criticized for being difficult to operationalize and quantify (Langley, 1999). The theory is often considered as being difficult and challenging to convert into quantifiable constructs because to its focus on dynamism and change across time (Langley, 1999). Coviello and Jones (2004) noted that it is fundamentally difficult to capture the dynamism and growth of entrepreneurial processes across time. It necessitates longitudinal research, which is resource- and time-intensive and are made more challenging by problems like participant dropout and retrospective bias. Although process theory provides insightful analysis of entrepreneurship, it is not without its detractors. The concept leaves certain elements of entrepreneurship less investigated by perhaps ignoring personal and environmental influences as well as creating operational and measurement difficulties. In spite of these critiques, the process theory continues to be a crucial tenet of entrepreneurship research because it enables a deep comprehension of entrepreneurial dynamics that other theories could overlook.

3.1.2.2 Relevance to the Study

The analysis and comprehension of these women's entrepreneurial journeys may be facilitated by using process theory to the study of entrepreneurial ecosystems and the performance of women entrepreneurs in Ghana. Women significantly contribute to the

economy of Ghana, which has a vibrant business environment (Gough and Langevang, 2016b). Researchers can follow the entrepreneurial path of women from opportunity identification through resource mobilisation to venture development and growth by using process theory. This viewpoint also makes it possible to comprehend the particular difficulties and possibilities that these women face inside the Ghanaian entrepreneurial environment.

Ghana's economy has benefited greatly in recent years from the growth of women's entrepreneurship (Gough and Langevang, 2016b). Understanding these women's entrepreneurial paths, interactions with the entrepreneurial environment, and venture performance from the viewpoint of process theory is very helpful (Gough and Langevang, 2016b). It is possible to get a dynamic knowledge of how these women find, assess, gather resources for, and build their businesses over time by using process theory to the study of women's entrepreneurship in Ghana. This perspective moves away from a static view of venture development and recognizes the procedural character of their entrepreneurial journeys.

In Ghana, women entrepreneurs see prospects in a range of industries, including digital companies, retail, and agriculture (Brixiová and Kangoye, 2016). The investigation of these opportunities' identification processes and the variables affecting them may be aided by process theory. Opportunities may be overlooked because of the socio-cultural background, which includes gender norms, educational attainment, and informational availability (Naude, Szirmai and Goedhuys, 2011).

Women often face particular challenges in this phase, such as limited access to credit and gender-based discrimination (Asiedu, Freeman and Nti-Addae, 2012). Studying resource mobilisation through process theory sheds light on how women entrepreneurs in Ghana marshal necessary resources to launch and grow their ventures. Understanding how women

overcome these obstacles will help them become more successful entrepreneurs. Like those of many other developing countries, Ghana's entrepreneurial environment offers both possibilities and difficulties. Process theory may provide light on these women's methods for navigating the ecosystem and overcoming structural obstacles. It may also illuminate how the ecosystem, which shapes the entrepreneurial process, affects the success and expansion of their companies (Stam, 2018).

The entrepreneurial identity's function as a moderating element in this situation is an interesting feature of applying process theory. The trajectory of the entrepreneurial process may be influenced by the identities of women entrepreneurs, which are molded by their individual experiences, social conventions, and cultural settings (Fauchart and Gruber, 2011). This may be a key element in figuring out the differences in women's entrepreneurial endeavors and results in Ghana. The way an entrepreneur navigates the entrepreneurial environment, seizes opportunities, and gathers resources might be influenced by their identity (Navis and Glynn, 2011). Understanding how the entrepreneurial identities of Ghanaian women entrepreneurs impact their journeys offers deep insights into how they overcome obstacles and take advantage of possibilities within the ecosystem.

Process theory provides a thorough and dynamic lens through which to view women's entrepreneurship in Ghana. It enables a thorough understanding of their business endeavors and relationships with their surrounding entrepreneurial environment. The formulation of policies and interventions to encourage and promote women's entrepreneurship in Ghana and other settings may therefore greatly benefit from the use of process theory.

3.1.3 Resource Dependence Theory (Reitz, Pfeffer and Salancik, 1978)

Resource dependence theory (RDT) is a vital technique for comprehending how organizations interact with their surroundings to get the resources they need. The RDT

framework, developed by Pfeffer and Salancik in 1978, offers a prism through which to see the consequences of such external dependencies and their influence on organisational behavior and results. According to the RDT, organizations rely on resources, and because resources come from their environment, external dependencies are unavoidable (Reitz, Pfeffer and Salancik, 1979). The strength of an organisation depends on its capacity to deal with these dependencies, successfully manage relationships with external parties, and get essential resources (Hillman, Withers and Collins, 2009). RDT advises organizations to manage these dependencies through a variety of tactics, including diversification, alliances, and interlocking directorates.

The dependency of organizations on resources is the first key tenet of RDT. Organizations need resources in order to survive and succeed, including money, people, information, and legitimacy. This creates inescapable external dependencies since these resources often originate from an organization's external environment (Reitz, Pfeffer and Salancik, 1979). According to RDT, resources are often limited and unclear. Due to dependencies they cause and the fact that they are not always readily accessible, organizations must plan and compete to get these essential inputs (Davis and Cobb, 2010). The need to manage external dependencies is further highlighted by the inherent scarcity and volatility.

The impact of the environment on organisational behavior is a further supposition. Organizations often need to modify their behavior, structure, and strategy to meet the needs and requirements of the environment in order to acquire essential resources and manage dependencies (Hillman, Withers and Collins, 2009). According to the RDT, organizations and other entities within their environment form a network of interdependent relationships. The power, behavior, and chances of survival of an organisation may all be greatly influenced by its position in this network and its capacity to manage its interdependencies (Reitz, Pfeffer and Salancik, 1979).

RDT presents a number of crucial conceptualizations based on these presumptions. It describes "resource dependence" as the extent to which a company depends on other parties for vital resources. The power dynamics of an organisation may be considerably changed by this reliance. According to the notion, the supplier of a resource has greater power the more important, unique, and non-substitutable it is (Reitz, Pfeffer and Salancik, 1979). RDT also conceptualises a range of tactics that businesses may use to control their dependence. These tactics include diversification, mergers, acquisitions, joint ventures, interlocking directorates, alliances, joint ventures, lobbying, and mergers (Hillman, Withers and Collins, 2009). RDT also recommends that businesses perceive their surroundings as a collection of resources. Organisations may increase their power, decrease their dependence, manage uncertainties, and improve their chances of survival by proactively managing this portfolio (Hillman, Withers and Collins, 2009).

3.1.3.1 Criticisms of the theory

The development of an understanding of how organizations negotiate with their surroundings to get essential resources has been greatly aided by the Resource Dependence Theory (RDT). RDT has encountered several challenges and shown gaps that motivate continuous research and theory development despite its widespread acceptance and impact. RDT is often criticized for prioritizing the external environment and resources above internal dynamics (Lückerath-Rovers, 2013). According to the RDT, an organization's capacity to control external dependencies is a key factor in determining whether or not it will survive and succeed (Reitz, Pfeffer and Salancik, 1979).

The deterministic viewpoint of RDT is the subject of another critique. Due to their reliance on outside resources, the thesis contends that organizations are greatly shaped by their environment (Reitz, Pfeffer and Salancik, 1979). However, this viewpoint minimizes the agency of organizations. Many academics contend that organizations may actively change

their surroundings and affect their reliance on resources rather than merely being passive beneficiaries of external factors (Emerson, 1962).

RDT has further drawn criticism for failing to emphasize each individual agency inside organizations. According to Hitt *et al.* (2007), the theory has typically downplayed the importance of human actors, such as leaders, in controlling resource dependence and determining the organization's strategy. A more "micro" approach on RDT that takes into consideration the role of people and their agency has been called for by some academics as a result (Bitektine, 2011). RDT's very rigid view of dependencies is another area where it receives criticism. According to the notion, dependencies are predetermined and generally persistent. Dependencies are often dynamic and subject to change over time as a result of a number of variables, including environmental changes, technology improvements, and organisational strategy (Hillman, Withers and Collins, 2009).

3.1.3.2 Relevance of the theory to the Study

Resource Dependence Theory (RDT) is effectively and insightfully applied to the subject. In especially for women in Ghana, this relationship may illuminate the dynamic and complicated character of business and provide a variety of fresh insights. Entrepreneurship requires the acquisition and management of a range of resources, particularly in difficult countries like Ghana. The capacity of female entrepreneurs to successfully traverse these contexts and gain essential resources, such money, information, expertise, skills, market access, and legitimacy, is often a determining factor in their success. Due to resource limitations, uncertainty, power dynamics, and systemic injustices, particularly those affecting women, this work is not always simple. The research may better understand these resource dependencies and how they affect the success of female entrepreneurs by using the RDT lens (Reitz, Pfeffer and Salancik, 1979).

RDT's emphasis on power dynamics and methods for managing dependencies may also help female entrepreneurs better understand how to negotiate their contexts, express their agency, and lessen their dependencies. The theory may be used to investigate the strategies used by women to obtain and exercise control over resources, including creating alliances, making use of social capital, and diversifying their source of resources (Hillman, Withers and Collins, 2009). RDT may also provide light on how entrepreneurial environments influence or restrict access to resources. It may provide light on how different players in the ecosystem, such as other business owners, investors, governmental bodies, and NGOs, are interdependent with one another and how this affects how well women function as entrepreneurs (Reitz, Pfeffer and Salancik, 1979).

Additionally, the study's postulated moderating function for entrepreneurial identity fits well with RDT's presumptions. An entrepreneur's interactions with the environment and her methods for handling resource requirements may both form and be affected by her entrepreneurial identity. Therefore, using RDT may aid in the investigation of how entrepreneurial identity affects the interaction between the entrepreneurial environment and the performance of female entrepreneurs. In practice, RDT may provide important theoretical support and direction for the suggested study. The theory may assist make sense of the complicated reality encountered by women entrepreneurs in Ghana by concentrating on resource dependencies, power dynamics, and strategic resource management. It can also provide important insights into their challenges, plans, and accomplishments.

3.1.4 Comparative analysis of selected theories

Institutional Theory, Process Theory, and Resource Dependence Theory are three prominent theories in the field of organizational and management studies. This section of the study compares the relative strength of each theory and recommends one of the theories to anchor the study on.

Institutional Theory focuses on how organizations conform to and are influenced by social norms, values, and rules within their institutional environment. It emphasizes the importance of legitimacy and institutional pressures in shaping organizational behavior. In the context of studying the entrepreneurial ecosystem and women entrepreneurial performance, Institutional Theory can provide insights into how societal expectations, norms, and regulations impact the behavior and outcomes of women entrepreneurs. For example, research has shown that institutional factors, such as cultural beliefs and gender norms, can influence women's access to resources, support systems, and opportunities for entrepreneurship (Gupta, Turban and Bhawe, 2008; Brush, De Bruin and Welter, 2009).

Process Theory, as proposed by Parsons, focuses on the dynamic interactions between individuals and their social environment. It emphasizes how individuals' actions, decisions, and behaviors are shaped by their social context and the processes of socialization. In the context of studying the entrepreneurial ecosystem and women entrepreneurial performance, Process Theory can provide insights into how individual-level factors, such as entrepreneurial identity, interact with the social environment to influence women's entrepreneurial outcomes. For example, research has shown that gender identity, self-efficacy, and social networks play a crucial role in shaping women's entrepreneurial intentions and success (Jennings and Brush, 2013).

Resource Dependence Theory focuses on how organizations acquire and utilize resources to achieve their goals. It highlights the interdependence between organizations and their external environment, emphasizing the influence of resource availability, control, and dependencies. In the context of studying the entrepreneurial ecosystem and women entrepreneurial performance, Resource Dependence Theory can provide insights into how women entrepreneurs access and leverage resources within their ecosystem. For example, research has shown that women entrepreneurs often face challenges in accessing financial capital,

networks, and other critical resources, which can impact their performance and growth (Marlow and Patton, 2005).

When considering the fit of these theories for studying the entrepreneurial ecosystem and women entrepreneurial performance, including the moderating role of entrepreneurial identity, it is important to note that each theory offers a unique perspective and set of insights. Considering the moderating role of entrepreneurial identity, Process Theory appears to be particularly relevant. Entrepreneurial identity refers to the extent to which an individual identifies with and internalizes the entrepreneurial role and values. Process Theory's emphasis on the dynamic interactions between individuals and their social environment can help uncover the mechanisms through which entrepreneurial identity influences women's entrepreneurial outcomes within the ecosystem.

To conclude, while all three theories; Institutional Theory, Process Theory, and Resource Dependence Theory offer valuable insights, Process Theory seems to be the most fitting for studying the entrepreneurial ecosystem and women entrepreneurial performance, particularly with a focus on the moderating role of entrepreneurial identity. This is because Process Theory's emphasis on individual-level factors and the dynamic interactions between individuals and their social environment aligns well with the central role of entrepreneurial identity in shaping women's entrepreneurial outcomes within the ecosystem.

3.2 Hypotheses Development

Based on the review of the empirical literature in chapter two, entrepreneurial ecosystem is proxied by access to finance, education and training, regulatory environment, networking and social capital as well as innovations. The entrepreneurial women performance is proxied by operational performance and market performance whilst the moderating variable-entrepreneurial identity is proxied by individual identity, venture outcomes and sociocultural

factors. These variables and their relationships are further discussed below and the conceptual diagram drawn.

3.2.1 Access to finance and market performance of women entrepreneurs

Access to finance and capital is noted to positively influence the growth and performance of enterprises (Gompers and Lerner, 2004; Ayyagari, Demirguc-Kunt and Maksimovic, 2011; Mollick, 2014; Audretsch and Belitski, 2017; Block *et al.*, 2018; Brown, Mawson and Rowe, 2019). The influence of financial literacy on businesses' financing choices influences the market performance of women entrepreneurs. Lusardi, Michaud and Mitchell, (2017) opined that financial literacy has a considerable impact on how business owners use various forms of financing. This was supported by Kozlinska (2020), who found that by empowering business owners to make better financial choices, financial literacy leads to improved market performance. Market performance is a crucial indicator of an entrepreneur's success and is often impacted by their ability to acquire capital (Bruhn and Love, 2014). Companies with better access to financing often do better on the market because they have more money to spend in innovation and growth. Case studies from many nations have also shown the connection between financial access and market success. For instance, Yildiz, Ayaydin and Pala (2020) discovered that SME market performance in Turkey is highly impacted by access to capital. Similar to this, a research carried out in Nigeria revealed that better market performance among entrepreneurial enterprises was connected with increased access to funding (Adeola and Evans, 2021).

Another new field of study is how innovation affects market performance and attracts funding (Martina, Giovanni and D'Adda, 2020) noted that innovative SMEs had better market performance due to their increased access to bank finance. This shows that since

creative businesses have a larger chance of development, investors may find them more appealing. From the research by Martina, Giovanni and D'Adda (2020) they highlighted how, notably bank credit, and consequently improve SME's performance on the market. The study by Martina, Giovanni and D'Adda (2020) discovered a significant association between the between a firm's creative activity and its access to bank financing, indicating that banks are more inclined to lend to businesses that are aggressively pursuing innovation.

Research findings consistently demonstrate the critical relationship between financial access and business performance, particularly for women entrepreneurs and SMEs. Coleman and Robb's (2009) study revealed a significant gender disparity in financial access, with women business owners facing greater barriers than their male counterparts. However, their key finding showed that when women entrepreneurs successfully obtained financing, their market performance matched that of male-owned businesses, suggesting that gender biases in lending processes, rather than business capability, create performance disparities. The importance of financial access for business resilience was highlighted in multiple studies. Cowling, Liu, and Ledger (2012) found that companies with better access to financing demonstrated higher survival rates during economic downturns. This finding was further supported by Cowling, Marlow, and Liu's (2020) analysis of UK firms during the 2007-2008 financial crisis, which showed that businesses with strong financial access were better equipped to weather economic shocks and maintain operations. In the evolving financial landscape, Chatterjee, Sarker, and Sarker (2020) discovered that fintech lending platforms positively influenced SMEs' market performance by providing alternative financing options. Their research emphasized how trustworthy intermediaries on these platforms increased loan success rates for SMEs.

Beck, Demirgüç-Kunt, and Maksimovic's (2005) cross-national study established a clear correlation between developed banking systems and higher entrepreneurship rates. Their

findings indicated that countries with advanced financial systems typically experienced greater entrepreneurial activity due to broader financial service options and stronger infrastructure. Government policy interventions also showed significant impact. Kerr, Lerner, and Schoar (2014) found that loan guarantees and subsidies effectively improved access to funding, leading to enhanced market performance for entrepreneurial ventures. These interventions enabled businesses to invest in crucial growth areas like R&D and market expansion. Finally, research by Dorfleitner, Grebler, and Priberny (2020) revealed that sustainable financing positively influenced SME performance. Their study of European SMEs demonstrated that access to sustainability-aligned funding enabled companies to invest in environmentally friendly technologies and practices, leading to improved market performance through cost reductions and enhanced brand reputation. The study hypothesises that

H1a: Access to finance has a positive and significant relationship on market performance women entrepreneurs in Ghana.

3.2.2 Access to finance and operational performance of women entrepreneurs

Studies consistently reveal significant findings regarding women entrepreneurs' relationship with financial access and business performance. Coleman and Robb (2009) discovered that while women entrepreneurs face greater financial barriers than their male counterparts, those who successfully obtain financing demonstrate operational effectiveness equal to male-owned businesses. The World Bank Group (2020) corroborated this finding, noting that when given equal access to resources, women business owners show comparable or superior operational success. Research on alternative financing solutions yielded promising results. Van Rooyen, Stewart, and de Wet (2012) found that microfinance services significantly improved

operational performance of women-owned businesses in developing nations. Similarly, Asiedu, Freeman, and Nti-Addae (2012) demonstrated that microfinance institutions substantially enhanced the operational performance of women-led businesses in Sub-Saharan Africa by expanding their financial capacity. Several studies revealed persistent gender disparities in traditional financing. Muravyev, Talavera, and Schäfer (2009) found that while women entrepreneurs weren't necessarily less likely to acquire financing, they faced more stringent credit restrictions, including higher interest rates and collateral requirements. Marom and Lussier (2014) discovered that women entrepreneurs received less venture capital investment despite demonstrating equal talent and innovation as male entrepreneurs, primarily due to stereotyping and underrepresentation in venture capital firms.

Research by Bardasi, Sabarwal, and Terrell (2011) in Eastern Europe and Central Asia revealed that women-led businesses were less likely to receive formal loans and more often deterred from applying due to anticipated rejection. However, their crucial finding showed that despite these barriers, female-led businesses matched male-led businesses in profitability and labor productivity. Regarding financial behavior, Brush, Greene, and Hart (2002) found that women entrepreneurs tend to rely more on internal than external funding due to perceived discrimination in the loan market. Mijid (2015) discovered that while women entrepreneurs typically receive smaller loans, they demonstrate superior loan repayment histories. The impact of financial literacy was highlighted by Field, Jayachandran, and Pande (2010), whose experimental study in India showed that financial literacy training significantly improved women entrepreneurs' business performance. Additionally, Orser, Riding, and Manley (2020) found that government programs aimed at increasing women entrepreneurs' financial access had substantial positive effects on closing the funding gap and improving operational efficiency.

These findings collectively demonstrate that while women entrepreneurs face significant financial access barriers, they exhibit strong business performance when given equal access to resources. The research suggests that solutions combining alternative financing methods, financial literacy training, and supportive government policies could help address these persistent gender-based disparities in entrepreneurial finance. The study hypothesizes that

H1a2: Access to finance has a positive and significant relationship on the operational performance of women entrepreneurs in Ghana.

3.2.3 Education and Training on Market performance of women entrepreneurs

Both academic research and policymaking have come to recognize the importance of education and training in improving the market success of women entrepreneurs. Entrepreneurs may considerably improve the performance of their enterprises by investing in education and training (Field, Jayachandran and Pande, 2010). In a study conducted by Mano *et al.* (2012), an evaluation was carried out to assess the effects of a training program on the performance of enterprises owned by women in Ghana. The researchers discovered that the implemented training program had a significant positive impact on business practices, resulting in notable improvements in sales and profits. This highlights the crucial importance of skill development through training in enhancing the market performance of women entrepreneurs. In a study conducted by Brixiová and Kangoye, (2016), it was found that the implementation of business management and entrepreneurship training had a significant positive impact on the performance of businesses led by women in Zimbabwe. The authors have reached the conclusion that investing in training programs could serve as a crucial strategy for fostering the growth and long-term viability of women-led businesses.

Scholars Fairlie and Robb (2009) opined that there is a positive correlation between the level of education attained by entrepreneurs and their likelihood of owning high-performance businesses. This implies that engaging in formal education may provide entrepreneurs with the essential skills and knowledge required to effectively navigate the intricate business landscape, ultimately leading to improved market performance. In a study conducted by Kautonen, Kibler and Minniti (2017) it was posited that entrepreneurial education has the potential to enhance market performance by equipping women entrepreneurs with the skills necessary to effectively identify and capitalize on business opportunities. The authors propose that the inclusion of entrepreneurial education has the potential to cultivate creative and critical thinking abilities, enhance problem-solving skills, and develop strategic decision-making capabilities. These competencies are believed to have a substantial impact on achieving success in the business realm. Unger *et al.* (2011) opined that entrepreneurship training can yield favorable outcomes in terms of business performance. This is achieved through the development of entrepreneurial self-efficacy and enhancement of entrepreneurial behaviors. This suggests that providing entrepreneurship training to women entrepreneurs may enhance their confidence levels and motivate them to engage in strategic risk-taking, ultimately resulting in enhanced market performance.

Goktan and Gupta (2015) conducted an extensive study that examined the impact of education on mitigating the gender disparity in entrepreneurship. The researchers discovered that education plays a vital role in the entrepreneurial success of individuals, regardless of their gender. However, it was observed that education tends to have a more pronounced influence on the performance of women entrepreneurs. It is argued that education has the potential to alleviate the impact of gender-related biases, particularly in relation to accessing financial resources. This is achieved by empowering women with the requisite skills and knowledge needed to thrive in the marketplace. The aforementioned study by Goktan and

Gupta (2015) highlights the efficacy of educational interventions in facilitating the empowerment of women entrepreneurs by enabling them to overcome societal obstacles and enhance their market performance. In a similar context, a research paper authored by Al-Dajani and Marlow (2013) examined the potential of enterprise education in offering valuable support to women entrepreneurs in developing economies. The study conducted by the researchers, using empirical data from Jordan, revealed that enterprise education had a positive impact on the business skills and self-confidence of women entrepreneurs. This, in turn, resulted in improved market performance. This highlights the significant importance of education in empowering women entrepreneurs, especially in economies where they may encounter more significant societal obstacles.

Research conducted by Valerio, Parton and Robb, (2014) examined the impact of business training on female entrepreneurs in Mexico. The researchers found that training had a notable and beneficial effect on the survival and growth of businesses led by women. The research indicates that business training has the potential to equip women entrepreneurs with valuable skills and knowledge that can be directly utilized to improve their business performance. A separate study conducted by Caliendo *et al.* (2015) examined the impact of start-up training on the level of success achieved by female entrepreneurs in Germany. The findings of their study demonstrated that engagement in start-up training had a notable impact on the survival rates and growth potential of female entrepreneurs. This highlights the significance of implementing focused training programs to improve the market performance of female entrepreneurs.

The study conducted by Fischer, Reuber and Dyke, (1993) examined the effects of industry-specific training on the performance of female entrepreneurs. It has been found that female entrepreneurs who underwent industry-specific training exhibited higher growth rates in comparison to those who received general business training. It is indicated that customizing

training programs to cater to the specific needs of various industries can prove to be a viable approach in enhancing the market performance of women entrepreneurs. Heilbrunn, Kushnirovich and Zeltzer-Zubida (2016) focused on examining the effects of training on the performance of female entrepreneurs in Israel. The researchers discovered that engaging in vocational and business training resulted in higher growth rates and profitability for businesses led by women. The enhanced business knowledge and skills were attributed to the training. The training program aimed to enhance the market performance of women entrepreneurs by equipping them with competencies in strategic planning, financial management, and marketing. In a study conducted by Munoz-Bullon, Sanchez-Bueno and Vos-Saz, (2018), it was observed that Spanish firms led by women with higher levels of education exhibit superior growth rates in comparison to similar businesses. They contended that education greatly improves women entrepreneurs' capacity to recognize new market possibilities and make wise strategic choices, hence enhancing the success of their company.

Carter *et al.* (2015) conducted a study that showcased the direct impact of graduate entrepreneurship education on the market performance of women entrepreneurs in the United Kingdom. The authors have concluded that graduate-level entrepreneurship programs provide women with the essential technical, managerial, and leadership skills required to effectively navigate the intricate business landscape. As a result, these programs contribute to the improvement of women-led enterprises' performance. This study highlights the significance of incorporating entrepreneurship programs into higher education in order to provide support for women who aspire to become entrepreneurs. A study conducted by Fairlie and Robinson, (2013) examined the effects of digital literacy training on the market performance of women entrepreneurs, focusing on the role of such training. A study revealed that female entrepreneurs who successfully completed digital literacy training experienced notable growth in their business revenues and expansion, in contrast to their counterparts who did not

receive similar training. This study emphasizes the significance of integrating digital literacy into entrepreneurship training programs, particularly in the current era of digital transformation. In a study conducted by Tambunan, (2017), the focus was on women entrepreneurs in Indonesia. The findings revealed that women who participated in financial management training experienced a noteworthy enhancement in the market performance of their businesses. The training program improved their understanding of financial concepts, empowering them to make well-informed financial choices, efficiently handle cash flows, and utilize financial services. These factors ultimately led to enhanced business performance (Tambunan, 2017). The study hypothesizes that

H1b1: Education and training have a positive and significant relationship with market performance of women entrepreneurs in Ghana.

3.2.4 Education and training and operational performance of women entrepreneurs

Education and training are essential elements of entrepreneurship, and in recent years, it has been more widely acknowledged that they have an impact on the operational effectiveness of female entrepreneurs. Multiple studies have extensively documented the favorable impacts of education and training on various facets of operational performance, including but not limited to productivity, decision-making, and business growth. In a study conducted by Peterman and Kennedy, (2003) it was discovered that an emphasis on general business and entrepreneurship education had a noteworthy impact on entrepreneurial intentions and capabilities, with a particular emphasis on women, during adolescence. The authors propose that such exposure can enhance the operational performance of women's future entrepreneurial endeavors by cultivating a more profound comprehension of business management and strategy from an early stage.

Carter *et al.* (2015) conducted a comprehensive analysis on the impact of education in the entrepreneurial context. Their findings revealed that women entrepreneurs with advanced levels of education demonstrate enhanced operational performance. This can be attributed to their heightened ability to identify and capitalize on business opportunities, effectively navigate intricate business landscapes, and proficiently manage growth. Additionally, there is a higher probability that they will have access to crucial resources such as financial support and social connections. Additionally, Minniti and Nardone (2007) discovered that the implementation of formal training can have a substantial positive impact on the operational performance of women entrepreneurs. This is achieved by enhancing their business skills and knowledge. The researchers also observed that training had even greater advantages for women entrepreneurs who had no previous business experience. This indicates that training could serve as a valuable resource for promoting equality and enhancing operational performance within this group.

In their study, Godwin, Stevens and Brenner, (2006) discovered that women entrepreneurs can enhance their decision-making abilities and subsequently improve operational performance through specialized training in key areas such as financial management, marketing, and strategic planning. Additionally, it was discovered that the advantages of this training course were not restricted solely to the acquisition of practical skills. They also observed a positive impact on the self-confidence and willingness to take risks among female entrepreneurs. The significance of digital training should not be overlooked. Thompson (2019) suggested that the provision of digital literacy training could have a significant impact on the operational performance of women entrepreneurs. This training would empower them to effectively utilize digital technologies for various essential business functions, including marketing, customer service, and operations management. This training program aims to

enhance the competitiveness of women entrepreneurs in the digital era, leading to notable enhancements in operational efficiency.

A comprehensive study conducted by Manolova *et al.* (2012) investigated the influence of education and training on the operational performance of women entrepreneurs. It has been discovered that women entrepreneurs who possess formal business education and relevant training are more adept at obtaining crucial resources, such as finance and human capital, for their businesses. Moreover, these women exhibited a higher level of proficiency in strategic decision-making, resulting in a direct enhancement of the operational efficiency and profitability of their enterprises. The authors have placed significant emphasis on the importance of education and training in enhancing the business knowledge, confidence, and credibility of women entrepreneurs. This, in turn, has the potential to positively impact their operational performance. Botha, Nieman and Van Vuuren, (2006) examined the relationship between training and operational efficiency specifically in the context of women entrepreneurs in South Africa. The findings of the study indicated that specialized training in key areas such as financial management and marketing had a positive impact on the operational efficiency of these entrepreneurs. The authors attributed this phenomenon to the improved capacity of these entrepreneurs to effectively manage their finances, develop sound marketing strategies, and make well-informed operational decisions following their participation in the training program.

Unger *et al.* (2011) conducted a comprehensive meta-analysis to investigate the impact of human capital variables, specifically education and training, on entrepreneurial performance. The results of their study indicate a positive correlation between education and training and entrepreneurial performance, with training exhibiting a slightly stronger association. The authors of the study contended that this phenomenon may be attributed to the specialized and relevant nature of skills acquired through training, which can result in immediate

enhancements in operational performance. Hinson, Boateng and Madichie, (2018) conducted a study in the digital context to investigate the impact of digital skills training on the operational performance of women entrepreneurs in Ghana. It has been found that this training has a substantial impact on the capacity of women entrepreneurs to effectively utilize digital technologies in various operational areas. As a result, there is an observed improvement in business efficiency, customer outreach, and overall profitability. This statement emphasizes the significance of possessing digital literacy skills in the contemporary business landscape that is becoming more reliant on digital technologies.

The study conducted by De Vita, Mari and Poggesi (2014) examined the effects of business training and education programs on small and medium enterprises (SMEs) led by women in Italy. The researchers reached the conclusion that women who had participated in these programs demonstrated significant enhancements in operational performance. They exhibited effective financial resource management skills and displayed a capacity for innovation in their business models. The research findings were significant in emphasizing the significance of context-specific training. This type of training encompasses a comprehensive understanding of the local business environment and cultural factors. Valerio, Parton and Robb, (2014) conducted a study in the microfinance sector, which revealed that training programs aimed at enhancing business knowledge and financial literacy among women micro-entrepreneurs had a significant positive impact on their operational performance. The female entrepreneurs demonstrated enhanced business practices, achieved higher sales figures, and exhibited an improved capacity to allocate funds towards reinvesting in their respective enterprises. The research highlights the significance of business education and training for micro-entrepreneurs, demonstrating its potential to greatly impact their operational success.

In a study conducted by Bullough, Renko and Abdelzaher, (2017), the researchers examined the influence of education on female entrepreneurship in developing economies. The research findings indicate that education, specifically in the field of business management, has a positive influence on the operational performance of women. This is achieved through the promotion of innovative thinking, the encouragement of calculated risk-taking, and the enhancement of decision-making abilities. Moreover, it has been observed that education plays a significant role in enhancing the probability of business formalization. This, in turn, facilitates improved access to formal financial resources and opens up avenues for potential market expansion (Bullough, Renko and Abdelzaher, 2017). In their study, Ayyagari, Beck and Demircuc-Kunt, (2007) examined the contribution of women in job creation, with a specific emphasis on the influence of training and education. It has been discovered that female entrepreneurs who underwent formal training demonstrated a higher propensity to hire additional staff members and expand their operational scope, thereby making a positive contribution to job creation. This study provides additional evidence of the correlation between education, training, and enhanced operational performance.

In a study conducted by Hechavarría and Ingram (2019), the focus was on women entrepreneurship in developing countries. The findings of the study indicated that entrepreneurship training programs had a positive impact on the operational performance of these entrepreneurs. The programs were found to be effective in equipping women entrepreneurs with the necessary skills to enhance their business management capabilities. The research highlighted the significance of business management and financial literacy training in enabling female entrepreneurs to make well-informed decisions that result in enhanced profitability and long-term viability. The study conducted by Kephart and Schumacher (2005) shed light on the impact of education and training on the operational performance of female entrepreneurs in the technology industry. It was discovered that

women who had undergone formal education and training in technology management demonstrated a higher level of proficiency in operating their tech-based businesses, resulting in improved operational performance. The study conducted by Kephart and Schumacher (2005) emphasizes the significance of providing sector-specific training to women entrepreneurs who are involved in specialized industries.

Brixiová, Ncube and Bicaba, (2015) conducted a study to examine the effects of entrepreneurship training programs with a gender focus. According to their research findings, training programs specifically tailored to address gender-specific obstacles have been shown to enhance operational performance among women entrepreneurs. These programs provided women with the necessary skills to effectively navigate business environments that often exhibit bias against them. As a result, participants experienced a notable increase in confidence and a significant improvement in their business performance (Brixiová, Ncube and Bicaba, 2015). Woldie, Leighton and Adesua, (2008) conducted a study in Nigeria to examine the effects of microfinance-based training on the operational performance of micro-enterprises led by women. The researchers discovered that the implementation of such training resulted in the adoption of more effective financial management practices, ultimately contributing to increased business growth and profitability. The findings highlight the significant contribution of microfinance institutions in not only offering financial support but also delivering essential training to women entrepreneurs. The study therefore hypothesis that

H1b2: Education and training have a positive and significant relationship with the operational performance of women entrepreneurs in Ghana.

3.2.5 Infrastructure and resources and the market performance of women entrepreneurs

The market performance of women entrepreneurs is greatly influenced by their access to physical infrastructure and resources. According to a study conducted by Kumar and

Quisumbing (2011), it was found that the availability of infrastructure, such as roads and electricity, had a notable positive impact on the market performance of female entrepreneurs in rural Bangladesh. The authors proposed that the presence of these infrastructure components enhanced market accessibility and facilitated the operational efficiency of women entrepreneurs. The study conducted by Ong'olo and Amisi, (2013) examined the influence of resource availability on the performance of female entrepreneurs in Kenya. The researchers reached the conclusion that the availability of business premises and technology had a positive impact on the market performance of these entrepreneurs. The authors also emphasized the importance of resources such as capital and business training, as they contribute significantly to the growth and long-term viability of businesses.

In their study, Grimm, Hartwig and Lay, (2017) conducted an analysis to examine the impact of infrastructure and resources on the performance of female entrepreneurs in West Africa. The findings indicated that the availability of electricity and a dependable water supply positively impacted the operational efficiency of these enterprises, consequently leading to an enhancement in their market performance. The researchers also discovered that the availability of resources, specifically startup capital, had a significant impact on the ability of these female entrepreneurs to expand their business operations. In the current era of digital advancements, the importance of digital infrastructure has witnessed a notable rise in significance for entrepreneurs. Women entrepreneurs in the digital economy experienced significant enhancements in their market performance as a result of improved access to digital infrastructure, such as the internet and digital tools (Huyer, 2021). The utilization of digital infrastructure allows women entrepreneurs to expand their market reach and streamline their business processes, resulting in improved efficiency and productivity (Huyer, 2021). In a study by Brixiová and Kangoye (2016), the significance of accessing financial resources for the performance of women entrepreneurs in Zimbabwe was emphasized. The

authors opined that the availability of credit played a significant role in determining the success of these entrepreneurs. This access to credit enabled them to make important investments in their businesses, acquire essential equipment, and fund their day-to-day operations.

A study conducted by Khan and Khalique (2014) examined the importance of business-related infrastructure in the achievement of female entrepreneurs in Malaysia. The study revealed that the presence of infrastructural elements, such as convenient access to business premises and adequate technological resources, had a substantial positive impact on the market performance of these businesses. The authors opined that a favorable business environment allowed women entrepreneurs to prioritize business growth over addressing infrastructural obstacles.

Carter *et al.* (2015) conducted a study in the United Kingdom that examined the influence of technology and digital infrastructure on the market performance of businesses led by women. It has been discovered that female entrepreneurs who effectively employed digital technology and online platforms for their businesses experienced notable increases in growth rates and profitability. The study emphasized that digital technology has equalized opportunities, allowing women entrepreneurs to enhance their competitiveness in the market. The authors Mauchi Ngoma Fungai, Muntengezanwa Margaret and Damiyano David (2014) conducted a study that emphasized the significance of financial resources in relation to the performance of women entrepreneurs in Zimbabwe. The researchers reached the conclusion that the availability of credit and other financial resources had a significant impact on the growth and expansion of businesses led by women. This finding highlights the significant impact that financial resources have on enhancing the market performance of women entrepreneurs (Mauchi Ngoma Fungai, Muntengezanwa Margaret and Damiyano David, 2014).

In their study, Gichuki, Mulu-Mutuku and Kinuthia (2014) examined the impact of infrastructural facilities and resources on women entrepreneurs in Kenya. The researchers reached the conclusion that women entrepreneurs experienced a significant improvement in market performance when they had access to resources such as machinery and equipment. The authors also indicate that the availability of high-quality infrastructure and resources is essential for the development and long-term viability of businesses led by women. A study conducted by Al-Dajani and Marlow (2013) examined the impact of infrastructure availability on the market performance of women entrepreneurs in the Middle East. The researchers noted that improved access to infrastructure, such as dependable electricity and transportation, played a crucial role in enhancing the market performance of businesses owned by women. Additionally, it was discovered that these infrastructural amenities played a significant role for women entrepreneurs operating in rural and semi-urban areas, where they frequently encounter infrastructural deficiencies. The study postulates that

H1c1: Infrastructure and resources have a positive and significant relationship with the market performance of women entrepreneurs in Ghana.

3.2.6 Infrastructure and Resources on the Operational Performance of Women Entrepreneurs

The crucial role of infrastructure in improving the operational performance of women entrepreneurs is clearly demonstrated in numerous studies (Manolova *et al.*, 2007; Kumar and Quisumbing, 2011). The availability of essential infrastructure, such as roads and electricity, had a notable positive impact on the operational performance of female entrepreneurs in rural areas of Bangladesh. The enhanced infrastructure resulted in a reduction in transportation costs, improved market access, and increased operational efficiency for these entrepreneurs (Kumar and Quisumbing, 2011). Carter *et al.* (2015) opined that women entrepreneurs who successfully leveraged digital technology and online platforms for their businesses

experienced notable improvements in operational efficiencies. The study highlighted the significance of digital infrastructure in augmenting the operational capabilities of female entrepreneurs, consequently resulting in heightened growth and profitability. Ong'olo and Amisi (2013) highlighted the significance of having access to resources such as business premises and machinery as it enabled women entrepreneurs to concentrate on essential business tasks, resulting in enhanced operational performance. The impact of infrastructure on women-led microenterprises in Sri Lanka was examined in a study conducted by Seneviratne and Jayawickrama, (2020). The results of their study indicated that the availability of essential infrastructure, such as transportation, communication facilities, and utilities, had a notable positive impact on operational performance. The authors noted that this enabled the entrepreneurs to optimize their business processes, lower operational expenses, and ultimately enhance their profitability.

In a study conducted by Neneh (2019), an examination was carried out to investigate the impact of infrastructure and resources on the performance of businesses owned by women in South Africa. The study emphasized that the availability of suitable technology and digital resources greatly enhanced the operational efficiency of these businesses. It is worth mentioning that the proficient utilization of digital resources, such as inventory management software or digital marketing tools, has contributed to the implementation of enhanced management practices, resulting in improved operational performance. The impact of physical infrastructure on the operational performance of women entrepreneurs in Tanzania was investigated in a research study conducted by Galan Mashenene and Kumburu, (2020). The findings revealed a significant relationship between physical infrastructure and the performance of women entrepreneurs. The provision of fundamental necessities such as water, electricity, and roads is crucial for ensuring the efficient functioning of businesses. In the absence of support, female entrepreneurs face challenges in maintaining optimal

efficiency and productivity, which can have a detrimental impact on the overall performance of their enterprises.

In their study, Aterido, Beck and Iacovone (2021) examined the significance of financial resources by assessing the influence of finance accessibility on the operational performance of businesses led by women in Mexico. According to the findings of their study, businesses that have access to formal financial services demonstrate improved operational performance. This is attributed to the fact that these resources enable capital investment, promote consumption stability, and enhance risk management capabilities. Iakovleva, Solesvik and Trifilova (2013) noted that there is compelling evidence to suggest that digital resources and infrastructure have a notable and beneficial effect on the operational performance of women entrepreneurs. A study conducted in Russia revealed that the utilization of digital resources, such as e-commerce platforms and digital marketing tools, can enhance operational efficiency by decreasing transaction costs, expanding market reach, and facilitating improved customer relationship management.

Welter and Smallbone (2011) conducted a significant study that examined the impact of environmental factors, such as infrastructure and resources, on the growth and progress of female entrepreneurs in Germany and the UK. It was discovered that the provision of support services and resources had a substantial positive impact on the operational performance of female entrepreneurs. This study highlights the significant impact of incubation centers, mentoring programs, and networking events on enhancing the operational performance of women entrepreneurs through the provision of essential business skills and knowledge. Ghosh and Vinod (2017) investigated the impact of infrastructure on female entrepreneurs in India. Their research findings indicate that the availability of essential infrastructure, such as transportation and electricity, has a substantial positive impact on the operational

effectiveness of female entrepreneurs. This improved access allows them to more efficiently reach markets and expand their customer base. The study postulates that

H1c2: Infrastructure and resources have a positive and significant relationship with the operational performance of women entrepreneurs in Ghana.

3.2.7 Networking and social capital and market performance

Networking and social capital have a significant impact on the success and market performance of firms. This observation holds particular accuracy when considering female entrepreneurs. Sullivan and Meek (2012) investigated the influence of networking on the market performance of female entrepreneurs. The research, which utilized data from the United States, revealed that female entrepreneurs who actively engaged in networking activities demonstrated enhanced market performance. By proactively participating in networking events, female entrepreneurs can enhance their market reach, discover potential business opportunities, and foster stronger customer relationships improving their market performance. The study conducted by Brush and Cooper (2012) investigated the impact of social capital on female entrepreneurs in a positive manner. It has been found that social capital, acquired through diverse relationships and networks, provides women entrepreneurs with valuable resources such as business insights, advice, and opportunities to establish connections with potential customers. As a result, this improvement led to their heightened ability to identify and take advantage of market opportunities, ultimately leading to improved market performance.

Amatucci and Sohl (2004) conducted a study to examine the influence of networking and social capital on women entrepreneurs in a global context, thus expanding the geographical reach of their research. Research findings indicate that cross-border networking significantly

enhances the market performance of women entrepreneurs. This is primarily attributed to the increased accessibility it offers to international markets and valuable resources. In addition, these international networks served as a valuable source of social capital, offering women entrepreneurs essential insights into foreign markets and business practices, ultimately enhancing their market performance. In their study, Brush, De Bruin and Welter, (2009) conducted research that provided insights into the potential of social networks and social capital in addressing the challenges faced by women entrepreneurs, particularly in societies characterized by patriarchal structures. The authors found that social capital played a crucial role in supporting female entrepreneurs in addressing socio-cultural obstacles, accessing necessary resources, and ultimately improving their market performance.

A research study conducted by Larty and Hamilton (2011) in the United Kingdom investigated the influence of networks on the market performance of female entrepreneurs. The research findings suggest that both formal and informal networks have a substantial impact on market performance. Women entrepreneurs who actively engage in various networking events have the opportunity to generate new business opportunities, gain access to important information, and foster strategic partnerships that can contribute to improved market performance (Larty and Hamilton, 2011). The research conducted by Yousafzai, Saeed and Muffatto (2015) emphasized the importance of social capital, particularly strong relationships, within the examined context. The researchers have made a discovery indicating that women entrepreneurs who establish strong relationships with their customers, suppliers, and other stakeholders exhibit a higher capacity to identify and leverage market opportunities, leading to improved market performance. The study emphasizes the importance of social capital as a valuable resource for female entrepreneurs (Yousafzai, Saeed and Muffatto, 2015).

In a study conducted by Mroczek-Czetwertyńska (2018), the objective was to examine the influence of online networks on the market performance of female entrepreneurs in Poland. The study findings indicate that female entrepreneurs who utilized online platforms for networking experienced an increased market reach, gained access to a wider range of resources, and as a result, observed improved market performance. This study provided a unique viewpoint to the ongoing discourse by investigating the impact of digital networks.

In their study, Ndemo and Mkalama, (2019) conducted research within the African context to investigate the impact of networking and social capital on the market performance of women entrepreneurs in Kenya. It was observed that female entrepreneurs who engaged in entrepreneurial networks demonstrated enhanced market performance. These factors can be attributed to the exchange of vital market information, enhanced access to credit facilities, and receiving support during challenging business circumstances. The research conducted by Brush, Greene and Hart (2002) demonstrated the importance of networking as a valuable resource for female entrepreneurs in addressing the gender disparity and improving their market performance. The researchers conducted an observational study and discovered that participation in networking groups yielded numerous advantages. It not only enabled individuals to access a broader range of resources but also facilitated peer learning and collaboration.

Renzulli, Aldrich and Moody (2000) conducted a study to examine the importance of social capital in the context of businesses led by women in the United States. The research conducted by Renzulli, Aldrich and Moody (2000) emphasized the considerable significance of social capital in enhancing the market performance of female entrepreneurs. Madsen, Neergaard and Ulhøi, (2003) conducted a comprehensive analysis to examine the impact of networking and social capital on the market performance of female entrepreneurs in Denmark, within a non-Western context. The findings revealed that female entrepreneurs who

actively engaged in business networks exhibited enhanced abilities in identifying market opportunities and efficiently overseeing business expansion. Consequently, these entrepreneurs witnessed improved market performance.

The study conducted by Robb and Watson (2012) demonstrated that women entrepreneurs who successfully utilized their social capital were able to obtain higher levels of funding for their businesses, resulting in improved market performance. The study emphasized the importance of social capital in acquiring financial resources, as it plays a vital role in determining market performance. In a comprehensive study conducted by Uzzi (1999), it was found that social capital, particularly strong networking ties, has a notable influence on the market performance of businesses, including those that are led by women. The study opined that a network of relationships with high levels of interconnectivity played a pivotal role in facilitating access to diverse resources, including financial capital and critical information. As a result, this led to improved market performance.

Based on a recent study conducted by Agarwal, Audretsch and Sarkar (2010), it was found that networking can provide significant benefits for female entrepreneurs, particularly in terms of knowledge spillover. The authors indicate that female entrepreneurs who engage in networking activities can gain valuable insights from others, leading to improved business practices and ultimately enhanced market performance. According to the findings of McAdam, Harrison and Leitch (2019) women entrepreneurs in emerging economies revealed that social capital played a crucial role in influencing the success of businesses. The study postulated that the development of strong social networks can provide women entrepreneurs with enhanced business opportunities, leading to improved market performance hence the study hypothesis that

H1d1: Networking and social capital have a positive and significant relationship market performance of women entrepreneurs in Ghana.

3.2.8 Networking and Social Capital and operational performance of women entrepreneurs

Many research investigations have acknowledged the importance of social capital and networking for operational effectiveness among women entrepreneurs. For instance, Littunen, (2000) discovered that business networking might have a direct impact on a company's operational success. According to the research findings, entrepreneurs who actively participated in extensive networking activities demonstrated a significantly higher rate of survival and growth in comparison to their counterparts with limited networks. This discovery highlights the significance of networking in enhancing operational performance and ensuring long-term business sustainability. In their study, Batjargal and Liu (2004) found a significant correlation between social capital and the operational performance of entrepreneurs. They observed that higher levels of social capital were linked to increased business profitability, growth, and innovation. A study conducted by McAdam, Harrison and Leitch (2019) examined the strategies employed by female entrepreneurs in the Middle East to optimize their businesses' operational performance through network utilization. It was discovered that these networks facilitated women's access to valuable resources, business guidance, and prospects, resulting in tangible enhancements to their firms' operational efficiencies.

Renzulli, Aldrich and Moody (2000) investigated the impact of social capital on the operational performance of businesses led by women in the United States. The study revealed a positive correlation between robust social connections within business networks and increased business profitability and growth. This underscores the significant impact of social capital in enhancing operational performance. In a compelling study, Welter (2011) highlighted the significant impact of networking in supporting women entrepreneurs in

overcoming institutional and social obstacles. The study discovered that robust networks could offer women the essential resources, knowledge, and credibility required to enhance the effectiveness and efficiency of their businesses. Additionally, a study conducted by Madsen, Neergaard and Ulhøi (2003) examined Danish women entrepreneurs and revealed that those who possessed extensive networks demonstrated enhanced operational performance. The researchers put forth the argument that these networks granted entrepreneurs access to crucial resources, guidance, and prospects that had a direct impact on their operational performance.

In their study, Liao and Welsch (2005) conducted an examination on the significance of social capital in the expansion of entrepreneurial enterprises. The research revealed that entrepreneurs who possess extensive social capital, characterized by robust connections with fellow entrepreneurs, customers, and suppliers, are better equipped to effectively oversee their business operations. Consequently, these entrepreneurs experience higher rates of growth and profitability. Hoang and Antoncic (2003) revealed that networking was found to have a significant impact on operational performance. It has been discovered that social capital, facilitated by networking, offers entrepreneurs, including women, with essential resources such as information, business opportunities, and financial resources. The authors highlighted the importance of networking in efficiently and effectively acquiring these resources, thereby improving operational performance. Furthermore, a study conducted by Watson (2012) demonstrated the significance of social capital in influencing entrepreneurial performance. During her research, it was discovered that female entrepreneurs who had cultivated significant social capital demonstrated a higher proficiency in recognizing and capitalizing on business opportunities. This skill has been observed to have a direct correlation with enhanced operational efficiencies, consequently leading to improved business performance.

In their study, De Vita, Mari and Poggesi (2014) investigated the influence of social capital and networking on the performance of businesses led by women in Italy. Networking has been identified as a valuable strategy for women entrepreneurs to overcome resource limitations. By engaging in networking activities, women entrepreneurs are able to expand their reach into new markets, establish connections with suppliers, and gain access to valuable information. As a result, their operational performance is greatly improved. Furthermore, a scholarly investigation conducted by Coleman (2007) focused on African American women entrepreneurs within the United States. This study revealed that networking plays a crucial role in improving operational performance. It was argued that the networks established and engaged in by these women offered them valuable access to resources, opportunities, and support that would have otherwise been unavailable. As a result, their businesses experienced enhanced operational efficiencies. In Kenya, Mwobobia (2012) conducted a study to investigate the influence of social networks on the operational performance of women entrepreneurs. It was determined that female entrepreneurs who effectively utilized their social networks demonstrated a greater ability to recognize and capitalize on business opportunities. As a result, these entrepreneurs experienced enhanced operational performance. The study therefore postulates that:

H1d2: Networking and social capital have a positive and significant relationship with the operational performance of women entrepreneurs in Ghana.

3.2.9 Regulatory environment and market performance of women entrepreneurs

An enabling regulatory framework plays a crucial role in influencing the business landscape for entrepreneurs, including those who are women. In their cross-country study, Terjesen and Amorós, (2010) highlighted the significant impact of the regulatory environment on women's entrepreneurial activities and their market performance. The researchers argued that countries with more flexible labor regulations and reduced bureaucratic processes exhibited a greater

proportion of women entrepreneurs and demonstrated improved entrepreneurial performance. The study conducted by Brush, de Bruin and Welter (2009) highlighted the significant impact of the regulatory environment on the performance of women entrepreneurs. The researchers suggested that the presence of supportive regulatory frameworks, which provide favorable conditions for business registration, access to capital, and contract enforcement, significantly influence the market performance of women entrepreneurs.

Thébaud, (2010) indicated that the regulatory environment has the potential to either impede or enhance the market performance of women entrepreneurs. In regulatory environments characterized by higher levels of gender equality, women entrepreneurs demonstrated a greater likelihood of achieving success. Conversely, in environments where gender inequality was prevalent, women entrepreneurs were more likely to encounter obstacles that could hinder their performance in the market. Additionally, Estrin and Mickiewicz, (2011) have observed the impact of the regulatory environment on women's perception of entrepreneurial opportunities. Their research indicates that a supportive regulatory framework has the potential to enhance women's perception of entrepreneurial prospects. This, in turn, can have a positive impact on their intentions to engage in entrepreneurship and subsequently contribute to their market performance. Aterido, Beck and Iacovone (2013) postulated that there exists a significant correlation between regulatory frameworks and the outcomes of women's entrepreneurship. The researchers discovered that countries with less complex business regulations exhibited higher rates of female entrepreneurship. Within these regulatory frameworks, women-owned businesses demonstrated a higher capacity to enter the market, achieve success, and contribute to overall economic growth.

In their study, Jennings and Brush (2013) conducted an analysis on the impact of gender-related regulations on female entrepreneurs. It has been observed that regulations that exhibit gender bias may pose as obstacles to the entrepreneurial performance of women. In contrast,

the implementation of policies that support gender equality has the potential to positively impact the business performance of women entrepreneurs, consequently resulting in improved market performance (Jennings and Brush, 2013). In addition, a study conducted by Williams and Kayaoglu, (2017), they highlighted the significant impact of government regulations on the success of women entrepreneurs. The authors highlighted the impact of regulations on access to credit, taxation, and business registration on the performance of women entrepreneurs in the market. Elborgh-Woytek *et al.* (2013) equally investigated the barriers faced by individuals of different genders in the field of entrepreneurship. The researchers discovered that regulatory environments that discourage gender discrimination, uphold equal rights, and support access to credit have a significant impact on enhancing market performance for women entrepreneurs.

Goltz, Buche and Pathak (2018) made significant contributions to the advancement of knowledge regarding the regulatory influences on women entrepreneurs. It has been found that nations with strong intellectual property safeguards have observed enhanced market performance among female entrepreneurs. The implementation of these regulations has fostered the development of innovative ventures, thereby enhancing competitiveness within the marketplace. The findings of a study conducted by Almodóvar-González and Ribeiro-Soriano, (2019) shed light on the impact of regional regulations on female entrepreneurs in Spain. The researchers discovered that areas with targeted regulations supporting women's entrepreneurship exhibited elevated levels of successful businesses owned by women which significantly influenced their market performance. The study states that

H1e1: The regulatory environment has a positive and significant relationship with market performance of women entrepreneurs in Ghana.

3.2.10 Regulatory environment and operational performance of women entrepreneurs

Regulations have a significant impact on the operational performance of women entrepreneurs as the implementation of gender-inclusive policies has a positive effect on the operational performance of women entrepreneurs. These policies enable women entrepreneurs to access improved opportunities and enhance the efficiency of their businesses (Welter, Brush and De Bruin, 2019a). Achtenhagen and Thill (2019) opined that there is a direct correlation between the regulatory environment and the operational performance of women entrepreneurs. They suggested that the implementation of regulations that promote fair competition has a notable and positive influence on the overall operational performance of women in entrepreneurship. Queirós and Faria, (2020) conducted an assessment to examine the influence of the regulatory environment on the operational performance of female entrepreneurs in Portugal. Their research revealed a significant correlation between supportive regulations and the operational efficiency of women entrepreneurs. Specifically, they found that a reduction in bureaucratic hurdles resulted in enhanced operational performance.

The growth of businesses led by women entrepreneurs was examined in a study conducted by Kautonen, Kibler and Minniti (2017) with a focus on the impact of regulatory conditions. It was discovered that in areas with favorable regulatory frameworks, female entrepreneurs observed increased levels of operational efficiency and business growth. They emphasized the importance of implementing policies that effectively decrease barriers to entry and alleviate administrative burdens in order to facilitate the expansion of businesses led by women. In their study, Sorgner, Bode and Krieger-Boden (2020) examined the influence of gender-based regulations on operational performance. Their findings indicate that countries with legal systems that do not discriminate have shown improved operational performance among women entrepreneurs. This supports the notion that regulations safeguarding against

gender discrimination in entrepreneurship are beneficial. The research conducted by Williams and Vorley (2022) highlighted the impact of formal institutions on the operational performance of female entrepreneurs operating within the informal sector. The findings indicate that the presence of enabling regulatory environments, accompanied by well-defined legal frameworks, had a positive impact on the operational performance of women entrepreneurs operating in the informal sector. This was primarily attributed to the improved access to formal markets that these regulatory environments facilitated. In keeping with a study conducted by Razmi and Firoozabadi (2020) in Iran, it was observed that regulatory support for women's entrepreneurship had a substantial influence on their operational performance. The research revealed that the implementation of regulations that promote female business ownership and safeguard against gender discrimination in credit markets had a positive impact on the operational performance of businesses owned by women.

In a recent study conducted by Desai (2021), a thorough examination was conducted to assess the influence of regulatory frameworks in India on the operational performance of women entrepreneurs. Desai's research revealed that specific legal regulations, particularly those related to family law and inheritance, had a notable influence on women's capacity to engage in entrepreneurial activities. The process of streamlining these regulations resulted in improved operational outcomes and enhanced prospects for business expansion among women entrepreneurs. Nwankwo, Phillips and Tracey (2021) conducted a study in Nigeria to examine the impact of the regulatory environment on the operational performance of women entrepreneurs in the agribusiness sector. The research findings indicate that regulatory environments that actively promote women entrepreneurs by implementing favorable policies regarding land and credit access have a substantial positive impact on their operational performance within this sector.

The impact of regulations supporting flexible working hours on the operational performance of women entrepreneurs was investigated in a study conducted by (Alon *et al.*, 2021). The researchers discovered that the implementation of these regulations enabled women to effectively manage their business operations alongside other responsibilities, resulting in enhanced operational performance. The operational performance of women entrepreneurs in Morocco was investigated in a study conducted by Sefiani, Bown and Jin, (2021), with a focus on the impact of tax regulations. It has been determined that the implementation of lower tax rates and simplified tax procedures has had a positive effect on the operational performance of women entrepreneurs. The modifications alleviated financial burdens and streamlined administrative complexities, resulting in a direct impact on business operations.

A recent study conducted in Australia by Breen and Karanasios (2020) examined the influence of food safety regulations on the operational performance of female entrepreneurs in the hospitality sector. The researchers discovered that the implementation of rigorous food safety regulations, although crucial for safeguarding public health, frequently imposes a disproportionate administrative workload on female entrepreneurs operating in the industry. This, in turn, negatively impacts their operational efficiency. Nevertheless, it was observed by those entrepreneurs who adeptly managed these regulatory obstacles frequently achieved superior performance compared to their counterparts. Doss, Summerfield and Tsikata (2020) conducted a study in developing countries, specifically focusing on Ghana. Their findings revealed that the implementation of laws and regulations targeting the enhancement of land rights for women had a notable positive impact on the operational performance of agricultural businesses owned by women. The research demonstrates the substantial influence that targeted regulatory modifications can have on women's entrepreneurship, particularly within industries that have historically been male dominated. The study postulates that

H1e2: The regulatory environment has a positive and significant relationship with the operational performance of women entrepreneurs in Ghana.

3.2.11 cultural and social and market performance

Culture exerts a significant influence on the attitudes, behaviors, and expectations of individuals. A study conducted by Gupta *et al.* (2009) revealed a significant influence of societal culture on the market performance of female entrepreneurs. Their findings indicate that women entrepreneurs in societies with more egalitarian gender norms tend to exhibit superior market performance. These societies actively promote and provide assistance to women's entrepreneurial endeavors, resulting in elevated levels of innovation, productivity, and market achievement. Social norms also have an impact on entrepreneurial outcomes. The research conducted by Bullough, Renko and Abdelzaher (2017) was centered around examining the impact of social norms pertaining to women's roles in the workplace on their entrepreneurial outcomes. It was discovered that women entrepreneurs operating in societies characterized by inflexible gender norms frequently encounter substantial obstacles and difficulties in attaining success in the marketplace. These obstacles can vary from restricted access to financial resources to limited networking opportunities, resulting in diminished market performance.

In their study centered on the Middle East and North Africa region, Aterido, Beck and Iacovone, (2021) discovered a significant association between social norms and the level of success achieved by women entrepreneurs. It was observed that countries with stricter societal norms regarding women's economic roles exhibited a lower presence of women entrepreneurs. Furthermore, the women who did engage in entrepreneurial activities experienced comparatively lower market performance. Although this occurrence is observed

worldwide, it is important to note that there are regional disparities. In a study conducted by Shneur and Jenssen, (2020), the focus was on the Nordic countries, renowned for their progressive gender norms. The findings revealed that women entrepreneurs in these countries have been able to attain market performance that is on par with their male counterparts, thanks to the presence of supportive social and cultural norms.

The study conducted by Munir, Léo-Paul and Pailot, (2021) shed light on the impact of cultural expectations surrounding femininity on the growth of French women entrepreneurs. It has been found that the adoption of traditional feminine roles can influence the entrepreneurial strategies employed by women, potentially resulting in limitations to their market performance. Moreover, it has been discovered that certain female entrepreneurs strategically leverage these cultural norms to their benefit, transforming them into distinctive selling propositions that enhance their market standing. In their study on the influence of social norms on entrepreneurship in Africa, Nchake, Koelle and Simeon (2021) discovered that the business growth of women is influenced by societal expectations regarding their roles. It was found that in societies where there is a greater expectation for women to prioritize household responsibilities, female entrepreneurs tend to operate smaller businesses with comparatively lower market performance when compared to their male counterparts. These studies highlight the significant impact of cultural and social norms on the market performance of women entrepreneurs. They serve as a reminder that entrepreneurship is impacted by the larger cultural and social environment rather than taking place in a vacuum hence the study hypothesis that.

H1f1: Cultural and societal norms have a negative and significant relationship with market performance of women entrepreneurs in Ghana.

3.2.12 Cultural and Operational Performance

A study was conducted Kibler *et al.* (2021) to investigate the impact of societal-level factors, such as social and cultural norms, on women entrepreneurs in Finland. It has been observed that women entrepreneurs may encounter challenges due to societal gender norms. However, it is also noteworthy that these norms can provide distinctive opportunities for them. For instance, female entrepreneurs who successfully devised innovative strategies to navigate these societal norms exhibited improved operational performance, highlighting the potential for women to capitalize on prevailing societal expectations. In their study, Jennings and Brush, (2013) examined the impact of social norms on the entrepreneurial outcomes of women. It has been argued that the prevailing social norm of associating entrepreneurship primarily with masculinity serves as a barrier to women's aspirations and achievements in the field of entrepreneurship. The authors suggested that this perception could be addressed by means of education, policy initiatives, and the promotion of successful women entrepreneur role models. This, in turn, could result in enhanced operational performance for women entrepreneurs. In a recent study conducted by Taherdoost and Brard (2021), the significance of social and cultural capital for female entrepreneurs in Iran was emphasized. The study concluded that female entrepreneurs who were able to leverage social networks and cultural capital demonstrated greater proficiency in navigating societal norms, leading to enhanced operational performance. Hechavarría and Ingram (2019) conducted a comparative analysis from an international standpoint, examining the impact of social norms on female entrepreneurs across various countries. The scholars concluded that in countries with lower levels of gender equality, women entrepreneurs experienced decreased operational performance because of limited access to resources and opportunities. It has been determined that societal expectations regarding the prescribed roles for women frequently serve as impediments to achieving entrepreneurial success. Notwithstanding these challenges, certain female entrepreneurs have demonstrated the ability to successfully overcome these obstacles

and improve their operational performance, highlighting the significance of entrepreneurial agency in navigating societal limitations (Williams and Vorley, 2022). societal attitudes towards women's roles can have a constraining effect on the establishment of businesses by women and their subsequent operational performance. The study highlighted the importance of altering societal attitudes in order to create a more favorable environment for women's entrepreneurship (Micozzi and Lucarelli, 2021).

The research conducted by Mrożewski and D\kabrowska (2020) shed light on the experiences of Polish women entrepreneurs. The study highlighted those societal norms can present obstacles, but they can also present distinctive prospects. As indicated by the findings female entrepreneurs who effectively utilized their networks within their local community experienced enhanced operational performance. Furthermore, Sonfield (2021) investigated the operational performance of women entrepreneurs within the Middle Eastern context, characterized by stringent societal norms pertaining to women's roles. The findings shows that women entrepreneurs who effectively overcame these limitations exhibited superior operational performance. Hence the study indicates that:

H1f2: Cultural and societal norms have a negative and significant relationship with the operational performance of women entrepreneurs in Ghana.

3.2.13 Innovation, knowledge spillover and market performance of women entrepreneurs

Engelen, Schmidt and Buchsteiner (2022) conducted a study that examined the convergence of women-led start-ups and innovation within the technology industry. It was discovered that female entrepreneurs demonstrated exceptional proficiency in incorporating and leveraging emerging technologies to enhance their products, resulting in notable advancements in market performance. The study discovered a notable association between the adoption of an innovative strategy and the expansion of market share, particularly within fiercely

competitive technology sectors. In addition, it has been observed that knowledge spillover, the process by which information and skills are shared from one context to another, has a significant impact on the market performance of women entrepreneurs.

Furthermore, Ngugi, Johnsen and Erdelyi (2020) provides valuable insights into the impact of knowledge spillovers on innovation activities within the horticultural sector of Kenya, particularly among women entrepreneurs. They indicated that female entrepreneurs who actively participated in knowledge exchange networks demonstrated a higher propensity to adopt innovative production methods, leading to an enhancement in their market performance. Their findings emphasizes the importance of networking and community collaboration as effective channels for the transfer of knowledge and fostering innovation.

In a recent study conducted by Minniti and Nardone, (2022) on the impact of innovative thinking on female entrepreneurs in Italy, It has been found that female entrepreneurs who implemented innovative business models and strategies experienced a notable enhancement in their companies' market performance. The authors emphasized the significance of knowledge spillover from academic institutions and entrepreneurship training programs in driving innovative thinking. This study highlights the significance of knowledge transfer from academia and training programs in promoting innovation among women entrepreneurs, leading to enhanced market performance.

In a separate study, Thébaud and Sharkey (2021) conducted research specifically targeting female entrepreneurs within the high-tech industry in the United States. It has been revealed that female entrepreneurs who actively adopt innovation and effectively utilize knowledge spillover from their professional networks have the potential to greatly improve their market performance. In addition, the researchers emphasized that women who had access to diverse and inclusive networks experienced greater opportunities for knowledge spillover, thereby

enhancing their ability to innovate and succeed in the market. In the Chinese context, Ding, Wu and Wu (2020) conducted research that highlighted the positive impact of knowledge spillover from international collaborations on innovation and market performance within women-led enterprises. It was discovered that female entrepreneurs who engaged in international collaborations and partnerships experienced advantages from the transfer of cross-cultural knowledge. This, in turn, strengthened their ability to innovate and improved their competitive standing within the market. Goel, G"oktepe-Hultén and Ram (2021) conducted a comprehensive study to examine the impact of intellectual property rights (IPR) on the promotion of innovation within the female entrepreneur community in the United Kingdom. It has been discovered that female entrepreneurs who actively safeguarded their intellectual property rights (IPR) demonstrated a higher likelihood of introducing innovative products or processes. As a result, their market performance experienced a significant improvement. The impact of knowledge spillover from incubation centers on the innovation activities of women entrepreneurs in India was investigated in a recent study conducted by Singh, Verma and Rao (2022). The research findings indicated that female entrepreneurs who utilized the shared resources and expertise provided by incubation centers experienced notable enhancements in their innovation capabilities, leading to improved market performance. The authors have underscored the significance of entrepreneurial ecosystems in facilitating the transfer of knowledge, which ultimately contributes to enhanced business outcomes.

In a study by Malmström, Johansson and Wincent (2017), the focus was on examining the influence of gender stereotypes on the evaluation of women's innovation capacities and the subsequent implications for their market performance. The researchers reached the conclusion that female entrepreneurs frequently encounter gender bias when presenting their innovative ideas. This bias can have a detrimental effect on knowledge sharing and impede

market performance. However, women who consistently demonstrated innovation and effectively communicated their ideas were able to overcome these biases and enhance their market performance.

In a notable research endeavor, Godwin, Stevens and Brenner (2022) conducted a study that examined the impact of female business role models on fostering innovation within the realm of women entrepreneurs. It has been discovered that being exposed to successful women entrepreneurs can facilitate the transfer of knowledge and encourage innovation, thereby improving market performance for emerging women entrepreneurs. This study suggests that knowledge spillover may also be facilitated by influential figures within the business community, leading to enhanced innovation and performance. The study hypothesized that

H1g1: Innovation and knowledge spillover have a positive and significant relationship with market performance of women entrepreneurs in Ghana.

3.2.14 Innovation and Knowledge spillover and operational performance

The role of innovation in enhancing the operational performance of women entrepreneurs has been widely acknowledged. The relationship in the technology sector was investigated by Laperche and Liu (2023). The research findings suggest that women entrepreneurs who possess a greater ability to recognize, incorporate, and leverage knowledge from external sources, referred to as higher absorption capacity, tend to exhibit higher levels of innovation, resulting in improved operational performance. This statement supports the idea that the capacity to capture and leverage knowledge spillover is a crucial element for fostering innovation and enhancing performance among women entrepreneurs.

In addition, there has been increasing recognition of the significance of entrepreneurial education in fostering innovation and enhancing operational performance among women entrepreneurs. According to the research conducted by (Mambula and Sawyer, 2023), it was

found that Nigerian women entrepreneurs who had received a higher level of entrepreneurial education demonstrated increased levels of innovation and displayed superior performance. This highlights the significance of education in equipping individuals with the essential knowledge required for fostering innovation and improving operational performance. In addition, gaining insight into the gender-based disparities in innovation practices can provide valuable guidance for developing strategies aimed at improving the performance of women entrepreneurs. Malmström, Johansson and Wincent (2017) noted that female entrepreneurs frequently encounter gender bias when presenting their innovative ideas. This bias has been found to impede the transfer of knowledge and adversely affect operational performance. Nevertheless, individuals who consistently engaged in innovation and adeptly conveyed their ideas were able to surmount these obstacles, ultimately enhancing their operational performance.

The study conducted by Alvarez, Urbano and Amorós, (2023) provides valuable insights into the impact of entrepreneurial ecosystems on the performance of female entrepreneurs. The researchers have identified that a supportive ecosystem plays a crucial role in facilitating knowledge exchange and fostering innovation among entrepreneurs, ultimately leading to improved operational performance. Female entrepreneurs have been observed to effectively leverage external knowledge and demonstrate enhanced innovation when operating within a dynamic and gender-inclusive ecosystem. This study underscores the significance of creating conducive environments that facilitate knowledge spillover in order to promote innovation within businesses led by women. Wu and Song (2023) examined the influence of digitalization on women's entrepreneurial endeavors in China. The results of their study emphasized that female entrepreneurs who utilise digital technologies have the ability to connect with a broader network, facilitating the sharing of knowledge. This, in turn, leads to increased innovation and enhanced performance. This study demonstrates the capacity of

digitalization to facilitate the transfer of knowledge and promote innovation, thereby enhancing the operational performance of women entrepreneurs. The study therefore postulates that:

H1g2: Innovation and knowledge spillover have a positive and significant relationship operational performance of women entrepreneurs in Ghana.

3.2.15 The moderating role of identity on the direct relationship between entrepreneurial ecosystem and entrepreneurial performance

The impact of the entrepreneurial ecosystem, which encompasses cultural, political, financial, and market factors, on entrepreneurial activities is significant (Stam, 2015). Factors such as the accessibility of financial assistance, societal endorsement of entrepreneurial endeavors, and a favorable regulatory framework all contribute to either fostering or hindering entrepreneurship. This issue is especially pertinent to female entrepreneurs, who frequently encounter gender-related obstacles throughout their entrepreneurial endeavors. These obstacles can include restricted access to financial resources and societal norms that affect their ability to succeed (Brush, de Bruin and Welter, 2009).

The concept of entrepreneurial identity has the potential to act as a moderating factor in the correlation between the entrepreneurial ecosystem and entrepreneurial performance. For example, a robust entrepreneurial identity has the potential to enable female entrepreneurs to overcome obstacles within the ecosystem and capitalize on existing opportunities, ultimately improving their entrepreneurial performance (Murnieks, McMullen and Cardon, 2019). It has been observed that entrepreneurial identity has a significant impact on how entrepreneurs perceive and utilize resources within the ecosystem. Female entrepreneurs who possess a robust entrepreneurial identity may demonstrate a greater propensity to recognize

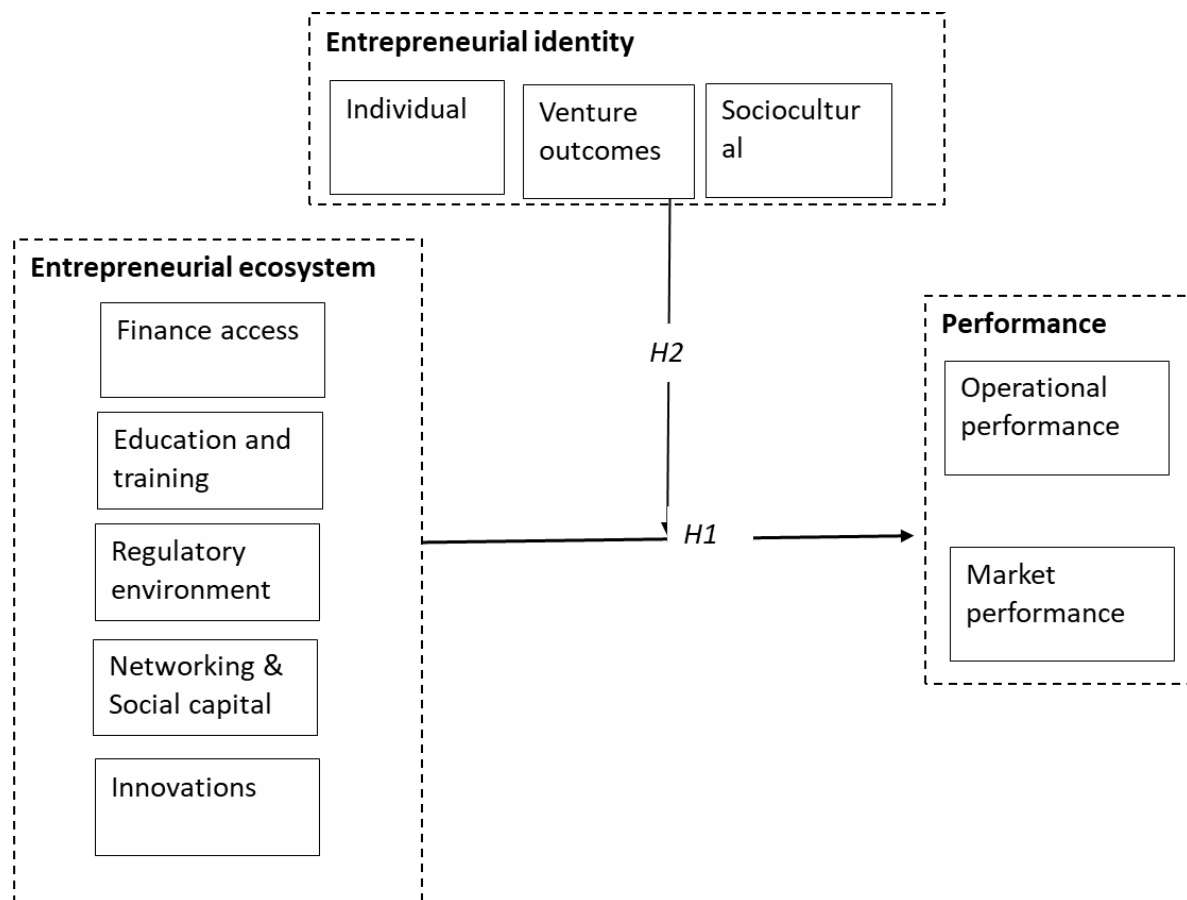
opportunities, establish valuable connections, and acquire necessary resources. As a result, they can enhance their performance, even in ecosystems that may not provide optimal support (Charles Y. Murnieks, Klotz and Shepherd, 2020). The study conducted by Dawson and Henley (2015) provides insights into the impact of entrepreneurial identity on entrepreneurs' perceptions and interactions within their ecosystems. It is suggested that female entrepreneurs who possess a strong entrepreneurial identity are more likely to exhibit higher levels of self-efficacy and demonstrate a greater inclination to capitalize on opportunities within their business environment. As a result, their overall performance is expected to be enhanced. In relation to the correlation between entrepreneurial identity and the entrepreneurial ecosystem, a study conducted by (Murnieks, McMullen and Cardon, 2019) shed light on the significance of this association, particularly in the context of women entrepreneurs in Malawi. The research indicates that the presence of a supportive ecosystem has a substantial positive impact on the performance of women entrepreneurs, especially when combined with a strong entrepreneurial identity.

On the other hand, female entrepreneurs who possess a less developed entrepreneurial identity may encounter difficulties in achieving success, even within a thriving entrepreneurial ecosystem. Entrepreneurs may potentially experience suboptimal utilization of available resources, a deficiency in resilience when confronted with challenges, and a failure to fully capitalize on opportunities. These factors have the potential to undermine their overall entrepreneurial performance. The concept of entrepreneurial identity serves as a framework through which female entrepreneurs engage with their ecosystem and influences their entrepreneurial performance. A comprehensive comprehension of this role of moderation is, therefore, imperative for the development of support mechanisms aimed at enhancing the entrepreneurial performance of women (Murnieks, McMullen and Cardon, 2019).

Numerous studies have been conducted to explore various facets of the entrepreneurial ecosystem and entrepreneurial identity in isolation. However, there has been a relative lack of focus on their interplay and collective impact on the entrepreneurial performance of women. Hence it is hypothesized that:

H2 Entrepreneurial identity significantly moderates the relationship between the entrepreneurial ecosystem and the entrepreneurial performance of women in Ghana.

Figure 3.1: Conceptual Framework



CHAPTER FOUR

METHODOLOGY

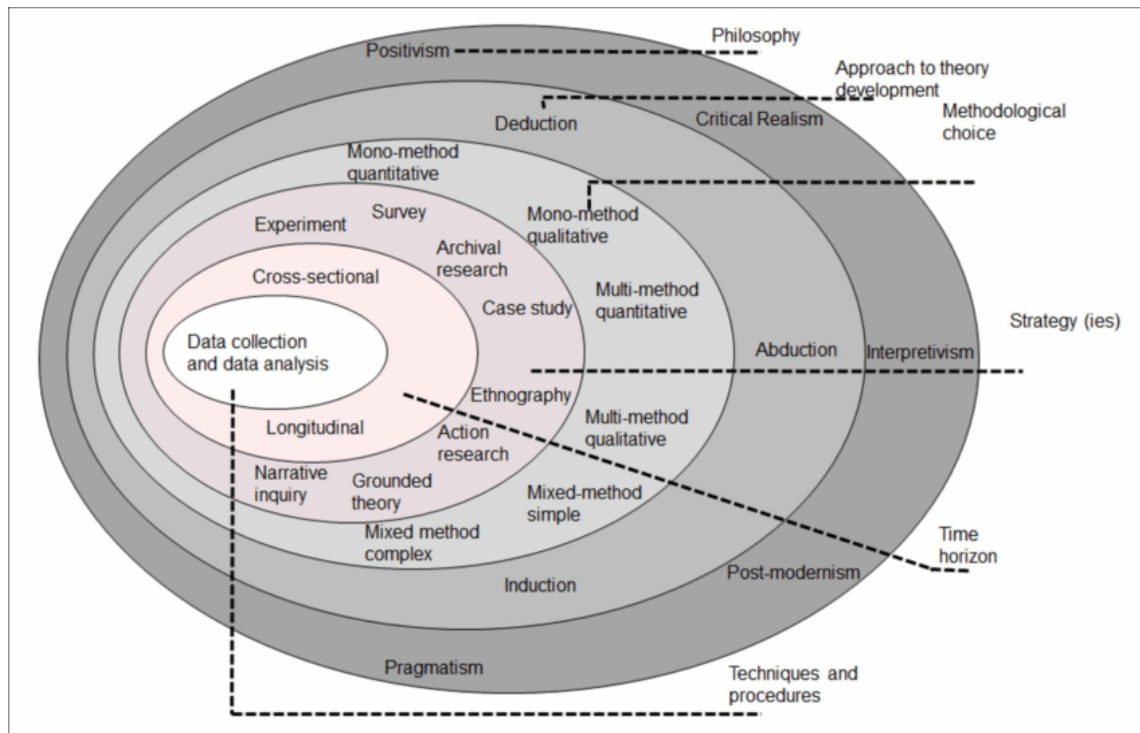
4.0 Introduction

This chapter presents the research methodological framework addressing the research questions. It also presented the philosophical stance and the justification for the choice of research methods and techniques adopted. Furthermore, the study also presented the research approach relevant to the study as well as the appropriate research methods. In this chapter, the researcher also defined and discussed the research population, sample and sampling techniques. The study in this chapter also reviewed and presented how the study instrument was developed, the reliability and validity of the study instruments, the data collection process, data analysis as well as the ethical consideration in the study.

4.1 The Methodological Framework

Research Onion (Saunders et al., 2007) is a methodological framing with crucial elements for researchers to understand and carefully select how research questions, research aim and objectives has been used to guide this study as illustrated in Figure 4.1 below.

Figure 4.1: Saunders Research Onion



Source: Saunders et al. (2007)

4.2 Philosophical Stance

The study adopted a philosophical stance that guided the selection of appropriate research approaches and methods (Saunders et al., 2007). The researcher defined the philosophical assumptions to enable readers to understand the perspective from which the study was designed and executed (Krauss et al., 2005). In social science research, this philosophical stance served as a 'research paradigm' that organized the research and guided the researcher in forming basic assumptions, identifying key problems, and selecting the best approach to seek answers (Neuman, 2000). The research followed Saunders et al.'s (2012) definition of a research paradigm as "a way of examining social phenomena from which particular understandings of these phenomena can be gained and explanations attempted" (pp. 140-141), while also considering Krauss's (2005) simpler definition as "the identification of the underlying basis that is used to construct a scientific investigation" (p. 759). The researcher

acknowledged that while positivism and interpretivism are the most commonly adopted research paradigms in social sciences (Orlikowski and Baroudi, 1991; Fitzgerald and Howcroft, 1998), this study positioned itself between these approaches. The research considered both epistemological concerns about knowledge acquisition and ontological aspects about the nature of reality (Walliman, 2020; Neuman, 2000; Saunders, P. Lewis and Thornhill, 2009).

The study adopted a positivist approach as it emphasized hypothesis testing, cause-and-effect relationships, and quantitative data. This approach enabled the researcher to test theories through scientific empirical methods (Onwuegbuzie and Collins, 2021). The research focused on measuring specific variables within the entrepreneurial ecosystem and aimed to generalize findings to a broader population (Carson et al., 2001). This approach proved particularly suitable for examining the relationship between defined variables such as ecosystem elements and entrepreneurial performance. The researcher took an objectivist approach to identify elements within the entrepreneurial ecosystem and investigate their effects on women's entrepreneurial performance in Ghana (Neuman, 2000).

Ultimately, the study implemented a postpositivist approach, recognizing that while elements within the entrepreneurial ecosystem could be measured objectively, subjective factors such as entrepreneurial identity played a significant role (Crotty, 1998). This balanced approach allowed the researcher to examine both measurable outcomes and subjective experiences within the entrepreneurial ecosystem. The combination of objective measurement and subjective understanding provided a comprehensive framework for investigating the relationships between entrepreneurial ecosystem elements, business performance, and entrepreneurial identity in the Ghanaian context.

4.3 Research Approach

The researcher employed a deductive research approach in this study, beginning with established theories to test specific hypotheses about women's entrepreneurship in Ghana. This choice aligned with the study's aim to test hypotheses derived from existing entrepreneurship theories against empirical data (Sekaran and Roger, 2016). The research began with established concepts and models of entrepreneurial ecosystems, women's entrepreneurial identity, and performance. The study followed the deductive process outlined by Creswell and Creswell (2021), progressing through several key stages. Initially, the researcher identified existing theories that provided an explanatory framework relevant to entrepreneurial ecosystems, women's entrepreneurial identity, and performance. From these theories, the researcher developed specific, testable hypotheses about the expected relationships between variables (Sekaran and Bougie, 2016).

The researcher designed a quantitative study to test these hypotheses, choosing this method because it allowed for empirical assessment of theories in an objective manner (Wilson, 2014). The research focused on examining relationships between variables identified from the literature, including the effect of ecosystem elements on women's performance and the moderating role of entrepreneurial identity. As Hyde (2000) noted, this deductive approach enabled testing of propositions about causal relationships between variables derived from theories. In the data collection phase, the researcher gathered quantitative data from women entrepreneurs in Ghana to empirically assess the hypotheses. This approach aligned with Thomas's (2006) emphasis on collecting specific evidence to test theoretical propositions. The researcher then conducted statistical analysis to determine if the data supported or rejected the hypothesized relationships between variables (Sekaran and Bougie, 2016). The final stage involved drawing conclusions about whether the theories were confirmed or disconfirmed based on the empirical results (Creswell and Creswell, 2017). This systematic approach allowed the researcher to move from broad entrepreneurship theories to specific

conclusions about women's entrepreneurship in Ghana, validating or falsifying the hypothesized relationships derived from the theories.

The researcher chose this deductive approach over inductive or abductive alternatives because it best suited the study's aim of theory testing rather than theory generation (Thomas, 2006). While induction might have offered more flexibility for exploratory research (Thomas, 2006), and abduction could have provided iterative cycles of theory development (Yu, Wang and Lai, 2018), the deductive approach provided the most appropriate framework for testing specific hypotheses about women's entrepreneurship in Ghana's context.

4.4 Research Method

The researcher adopted a quantitative methodological approach for this study based on its alignment with the research objectives and philosophical stance. The primary research question, "What is the relationship between the entrepreneurial ecosystem and entrepreneurial performance of women entrepreneurs in Ghana, and how does entrepreneurial identity moderate this relationship?" required statistical examination of associations between specific variables (Saunders, Lewis and Thornhill, 2012). The researcher selected quantitative methodology because it enabled objective analysis through mathematical and statistical calculations of empirical data, which aligned with the study's positivist philosophical stance (Saunders, Lewis and Thornhill, 2012). This choice supported the study's aim to test hypotheses derived from the conceptual model developed through literature review (Bryman, 2016).

In implementing this methodology, the researcher designed a highly structured data collection strategy with closed-ended questions, which facilitated efficient data gathering from a large sample size (Walliman, 2020). This approach was crucial for achieving the study's goal of generating generalizable findings about women entrepreneurs in Ghana. The structured

nature of the data collection instrument allowed participants to complete it in a relatively short time while ensuring consistency across responses. The researcher chose this method over qualitative or mixed methods approaches because the study aimed to test specific hypotheses about relationships between entrepreneurial ecosystem elements, performance, and identity. While qualitative methods could have provided in-depth understanding through emphasis on words rather than numbers (Bryman and Bell, 2020), the researcher determined that statistical analysis of quantifiable data would better serve the study's objectives of examining causal relationships and producing generalizable results. The quantitative approach also aligned with the study's focus on generalization of findings. The researcher employed statistical analysis to ensure the selected sample was representative of the broader population of women entrepreneurs in Ghana (Saunders, Lewis and Thornhill, 2012). This methodological choice enabled the researcher to collect data from a large sample size, increasing the probability of selecting a representative sample and providing generalizable results (Bryman and Bell, 2020).

While acknowledging Bryman's (2016) caution against strictly separating quantitative and qualitative methods, the researcher determined that a purely quantitative approach best served the study's objectives of testing hypotheses and examining relationships between variables in Ghana's entrepreneurial ecosystem. This methodological choice provided the framework necessary for systematic data collection and analysis to address the research questions and test the proposed hypotheses.

4.5 Research Strategy

The researcher implemented a cross-sectional quantitative survey strategy to assess the entrepreneurial ecosystem and performance of women entrepreneurs in Ghana, with entrepreneurial identity as a moderating variable. This strategy was selected over experimental research because the study did not require manipulation of conditions or

variables to observe reactions (Neuman, 2014). The cross-sectional approach enabled the researcher to study the phenomenon at a specific point in time, which proved both time-effective and less expensive compared to longitudinal studies (Bryman, 2016). This choice aligned with similar methodologies used in existing studies of women's entrepreneurship. For instance, the researcher drew insights from Gicheva and Link's (2013) survey of women entrepreneurs in the US, which quantified relationships between start-up financing and firm performance, and Bullough et al.'s (2014) cross-sectional survey of female entrepreneurs in Ghana that demonstrated links between entrepreneurial self-efficacy and business growth.

In designing the survey strategy, the researcher focused on collecting numerical data on key variables including business performance, funding, and growth (Creswell and Creswell, 2017). This approach enabled statistical analysis to test relationships between ecosystem factors and entrepreneurial performance. The researcher utilized quantitative scales to assess entrepreneurial identity, allowing for statistical testing of its moderating effect (Fauchart and Gruber, 2011). For questionnaire distribution, the researcher considered multiple methods including online surveys, paper-and-pencil surveys, face-to-face interviews, phone interviews, and mail surveys (Dillman, Smyth and Christian, 2014). Each method presented specific trade-offs: online surveys offered low cost and convenience but risked biasing the sample toward internet users (Wright, 2005); paper surveys enabled reaching people without technology access but increased costs for printing and data entry; face-to-face interviews allowed rapport building but limited scalability (Opdenakker, 2006).

Taking inspiration from the GEM Global Entrepreneurship Monitor's methodology (Kelley et al., 2012), the researcher adopted a mixed-mode approach to offset limitations of any single method. This decision helped maximize both sample size and representativeness while working within resource constraints. The researcher carefully structured the survey to capture individual behavior and ensure the selected sample represented the target population of

women entrepreneurs in Ghana (Queirós, Faria and Almeida, 2017). This strategic approach enabled the researcher to compare different groups within the sample, such as high versus low performing women entrepreneurs, while maintaining the ability to generate generalizable findings about the relationships between Ghana's entrepreneurial ecosystem, women entrepreneurs' performance, and the moderating role of entrepreneurial identity.

4.6 Population of the study

Defining an appropriate target population is crucial in a quantitative study to ensure the sample represents the group of interest and allows generalization of findings (Lavrakas, 2008). According to Lavrakas (2008), a target population is “the total group of individuals from which the sample might be drawn” (p. 1). It's the full set of cases the researcher wants to study and make conclusions about. Creswell and Creswell (2017) state that a study population is “an entire set of individuals or objects having some common characteristic” (p. 393). The population should align with the research problem and specific variables being examined. A study population may also be called the target population or survey population. It comprises the total group that the researcher aims to describe or draw conclusions about, often using a sample due to population size (Bartlett, Kotrlik and Higgins, 2001). Fowler Jr, (2014) emphasizes that a study population should be clearly specified, providing details like eligibility criteria, geographic location, age range, etc. Defining the target population is key for determining an appropriate sampling strategy.

For this study, the population is women who are currently operating their own businesses in Ghana. The target population for the study comprises both formal small business owners as well as microenterprises or informal ventures. Geographically, it makes sense to concentrate on urban areas where entrepreneurial infrastructure is concentrated (Jalbert, 2000; Stevenson and St-Onge, 2005). Rural areas have very different conditions, so a nationwide sample would require stratification (Esselaar *et al.*, 2007). Accra, the capital city of Ghana have the

most developed entrepreneurial ecosystems (Abor and Quartey, 2010) hence for the purpose of this study, the targeted population is women owned businesses operating in the Greater Accra Region.

4.7 Sampling Technique and the sample size determination

When it comes to sampling, there are two types: probability and nonprobability. Probability sampling is utilised to generate inference about a population from a sample (Saunders, Lewis and Thornhill, 2012). During probability sampling, each element in the population has an equal probability to be selected to sample. Probability sampling represents the population in the most reliable way (Walliman, 2011). However, the use of probability sampling is not always possible or feasible. Probability sampling requires a sampling frame, which is a list of all the elements in the population from which the sample will be drawn. An absence of the sampling frame, therefore, will prevent from using the probability sampling techniques. This leads to the utilisation of non-probability sampling. There are several non-probability sampling techniques, such as, quota, snowball, and convenience sampling. Deciding on which sampling technique to use depends on the objectives of the study.

After considering the different sampling techniques and its appropriateness for the purpose of this study, it was decided that a non-probability self-selection convenience sampling technique will be used (Etikan, 2016). The main reason behind this decision is the lack of sampling frame. There is no known number of women owned businesses in the Greater Accra Region. Based on the aforementioned sampling issue, the non-probability self-selection convenience sampling technique was selected for this study.

Non-probability convenience sampling involves selecting participants who are easily accessible and willing to take part in the study (Etikan, 2016). This sampling method was appropriate for this research on women entrepreneurs in Ghana given the challenges in

defining an accurate sampling frame. As the target population comprises private small business owners across Ghana, there is no complete list available of all who meet the eligibility criteria. Constructing such a sampling frame would be infeasible, particularly within limited research budget and timeline constraints (Henry, 1990; Marshall, 1996). Even private business registries are unlikely to cover all eligible informal sector enterprises. However, convenience sampling provides an alternative means of recruiting hard-to-reach populations when no sampling frame exists (Marpsat and Razafindratsima, 2010). The researcher can identify participants by leveraging local contacts, entrepreneurship networks, referrals, and snowball sampling. This flexibility enables accessing the target population despite inability to define the full sampling frame. While limitations of this approach include risks of bias and lack of representativeness, convenience sampling is considered an acceptable compromise for exploratory research on hard-to-reach populations (Henry, 1990). As statistical inference to the broader population is not a goal, the approach can still yield useful insights even if the sample is not random or representative.

4.7.1 Sample size determination

Defining an adequate sample size is crucial in quantitative research to ensure statistical power for detecting meaningful effects (Faber and Fonseca, 2014). Sample size is defined as the number of observations or participants included in a study, drawn from the broader target population (Bartlett et al., 2001). For an unknown population size, a common approach is to use a sample size formula for a proportion. The Cochran's formula (see equation 1) is commonly used when the population size is unknown (Bartlett, Kotrlik and Higgins, 2001):

..... (Equation 1)

Where:

n = sample size

z = z-score based on desired confidence level (e.g. 1.96 for 95% confidence)

p = estimated proportion of population with characteristic of interest (often conservatively set at 0.5 for unknown true proportion)

e = desired margin of error

This formula is proposed for the study as the full target population size is unknown. With a 95% confidence level and 5% margin of error, the Cochran's formula would give a minimum sample size of 384. The Cochran's formula is appropriate when the focus is estimating a proportion in the population (Bartlett, Kotrlik and Higgins, 2001). It allows determining an adequate sample size based on the desired precision without needing to know the actual total population size. This makes it a useful technique when studying a hard-to-reach or informal population like women-owned MSMEs in Ghana. Adding a 50% oversample to account for potential missing data and exclusions brings the total recommended minimum sample size to approximately 570 women entrepreneurs (Israel, 2013). This focused yet sufficiently powered sample will allow detecting relationships between entrepreneurial ecosystem, performance, and identity among women led MSMEs in Greater Accra and it provides a reasonable initial sample for this exploratory research on a hard-to-reach population.

4.7.2 Adequacy of Sample Size

The adequacy of the sample size in this study is a crucial consideration, as it directly impacts the generalizability of the findings and the ability to develop a robust framework. There are two schools of thought regarding the sufficiency of the sample size in this study.

On one hand, some researchers argue that the sample size is adequate for generalization. According to Tabachnick and Fidell (2019a), a sample size of 300 is considered "comfortable" for factor analysis, which is a key statistical technique used in this study.

Moreover, Hair *et al.*, (2010) suggests that a minimum sample size of 200 is required for structural equation modeling (SEM), the primary analysis method employed in this research. Given that the current study's sample size exceeds these recommendations, proponents of this view would argue that the sample is sufficient for generalization. Furthermore, Comrey and Lee (2013) provide a scale for evaluating the adequacy of sample sizes in factor analysis: 100 = poor, 200 = fair, 300 = good, 500 = very good, and 1,000 or more = excellent. Based on this scale, the current study's sample size would be considered "good" for factor analysis, further supporting the argument that the sample is adequate for generalization.

On the other hand, critics may argue that the sample size is not sufficient for developing a comprehensive framework of women's entrepreneurial performance in Ghana. Ghana has a population of approximately 30 million, with women constituting about 51% of the population (Ghana Statistical Service, 2021). Given the diverse regional, cultural, and socio-economic contexts within the country, a sample size of around 413 women entrepreneurs may not fully capture the heterogeneity of women's entrepreneurial experiences in Ghana.

Moreover, when developing a framework, it is essential to ensure that the sample is representative of the population of interest. Struwig (2011) emphasize the importance of a representative sample in ensuring the external validity and generalizability of the research findings. While the current study's sample is drawn from various sectors, it may not be entirely representative of the population of women entrepreneurs in the country.

Since the purpose of the study is to expand existing theories and not develop a framework for women entrepreneurs in Ghana, the total sample size of 413 respondents is considered very good for generalizability.

4.8 Development of Research Instrument

The measuring items used in the study were adapted from previous empirical studies (See Table 4.1). Adapting and building upon previously validated questionnaire items and scales can be highly beneficial in survey research (Wieland *et al.*, 2017). The cross-cultural adaptation of research instruments is an important process to ensure validity and reliability when using questionnaires in new settings. As Reichenheim *et al.* (2007) explain, "the use of instruments in populations culturally and socially different from the original intended population demands a process of adaptation" (p. 1). When adopting a questionnaire from a previous study, it is essential to assess both conceptual and item equivalence to determine if the instrument measures the same constructs in the new population (Beaton *et al.*, 2000). As Gjersing, Caplehorn and Clausen (2010) found in their study, the failure to properly adapt a questionnaire can result in poor model fit and low validity. Through appropriate adaptation techniques like back-translation and pretesting on the target population, items can be modified to increase understandability and relevance (Guillemin, Bombardier and Beaton, 1993). Making adaptations also allows questionnaires to be tailored to the strategic needs of a specific project or context (Manual, no date). However, retaining some standardized core questions permits useful international comparisons, if desired (Manual, n.d.). Overall, thoughtful adaptation enables validated instruments to be appropriately utilized in new settings and languages. This approach is relevant for measuring constructs like entrepreneurial ecosystem, business performance, and entrepreneurial identity in the study.

As indicated in the Table 4.1, existing instruments were adapted and adopted to measure the various constructs the study seeks to explore.

FIN - Access to Finance: This measures women entrepreneurs' ability to access financial capital and credit needed to start and grow their businesses. The adapted items likely assess satisfaction with financing options, ease of obtaining loans, etc.

EDU - Education and Training: This assesses women entrepreneurs' access to entrepreneurship education, business management training, mentoring programs, and other skill-building resources.

INF - Infrastructure and Resources: This evaluates the quality and availability of physical resources like transportation, telecommunications, energy, and technology infrastructure that enable entrepreneurial activity.

NET - Networking and Social Capital: This looks at women entrepreneurs' professional networks and connections that can provide information, advice, partnerships and other support.

REG - Regulatory Environment: This gauges the effect of laws, policies, and regulations on women starting and operating businesses. It measures perceptions of red tape, licensing, legal protections, etc.

CUL - Cultural Environment: This examines how societal and cultural norms affect women entrepreneurs, in terms of start-up motivation, growth ambitions, work-life balance, discrimination, etc.

INN - Innovation: This measures key traits of innovative companies like R&D spending, new product development, technology adoption, and intellectual property.

MKP - Market Performance: Marketing metrics like market share and customer reach.

OPE - Operational Performance: Operational metrics like productivity, efficiency, quality control, and business processes.

EI - Entrepreneurial Identity: Psychological measures of an entrepreneurial mindset and orientation like risk-taking, innovativeness, proactiveness, autonomy, and self-efficacy.

By adapting validated measures of these important constructs, the researcher assess how the entrepreneurial ecosystem and women entrepreneurs' performance in Ghana compare to other contexts. Moderating effects of entrepreneurial identity also evaluated.

Table 4.1: Measuring items of entrepreneur ecosystems

Code	Adapted Items	Source
FIN	Access to Finance for Women Entrepreneurs	(Sweida and Reichard, 2013; Poggesi, Mari and De Vita, 2016)
EDU	Education and Training of Women Entrepreneurs	(Edelman <i>et al.</i> , 2016; Shirokova <i>et al.</i> , 2016)
INF	Infrastructure and Resources	(Klyver and Schenkel, 2013; Poggesi, Mari and De Vita, 2016)
NET	Networking and Social Capital	Edelman <i>et al.</i> , 2016; Klyver <i>et al.</i> , 2013
REG	Regulatory Environment	(Klyver and Schenkel, 2013; Poggesi, Mari and De Vita, 2016)
CUL	Cultural Environment	(Sweida and Reichard, 2013; Poggesi, Mari and De Vita, 2016)
INN	Innovation	(Poggesi, Mari and De Vita, 2016; Shirokova <i>et al.</i> , 2016)
MKP	Market Performance	(Poggesi, Mari and De Vita, 2016; Shirokova <i>et al.</i> , 2016)
OPE	Operational Performance	(Klyver and Schenkel, 2013; Edelman <i>et al.</i> , 2016)
EII	Entrepreneurial Identity-individual	(Radu-Lefebvre <i>et al.</i> , 2021b)
EIV	Entrepreneurial Identity-venture	(Radu-Lefebvre <i>et al.</i> , 2021b)
EIS	Entrepreneurial Identity-socio-cultural	(Radu-Lefebvre <i>et al.</i> , 2021b)

4.9 Data Collection process

Data collection is an important aspect of any research study. For this study, primary data was collected using a survey method, a widely used research method (Kraus *et al.*, 2019), as it allow collection of large amounts of standardized data from a population in an efficient

manner (De Vaus, 2014). For this study, a structured questionnaire was developed based on existing scales to measure the key study constructs of entrepreneurial ecosystem, entrepreneurial performance, and entrepreneurial identity. The questionnaire was administered to respondents through the use of the women association of entrepreneurs WhatsApp messenger platforms (Burdess, 2021). The choice of the women association of entrepreneurs was appropriate to act as a layer of authenticating the sampled respondents. Given the number of women entrepreneurs on the platform, data collection was done over a 3-month period to allow sufficient time for researcher to engage respondents and retrieve completed surveys (Krishnan and Scullion, 2017). This duration is adequate yet not too long to risk study attrition issues. The researcher made available research assistant contacts who were on standby to explain and guide respondents who had difficulty in answering the questionnaire. Follow ups were done on the respondents who had difficulty with the questionnaire. Meetings were set up with hard copy questionnaire at their work places at an agreed time of the day that did not inconvenience their business operations.

4.10 Methods of Data Analysis

The study employs specifically, descriptive analysis, and multivariate data analyses such as factor analysis (EFA and CFA), Structural Equation Modelling (SEM), through the use of two analytical software; Statistical Package for Social Sciences (SPSS) version 25.0 and the SEM-PLS v.4.0 Partial Least Square. These two are common software used in social science research (van Berlo, van Reijmersdal and van Noort, 2023) making them appropriate for this study. For initial coding, inputting and cleaning of the study data, SPSS would be used (Field, 2018). The data cleaning or screening process would help identify missing values, and outlying responses. The final data set was then transferred to PLS-SEM 4.0 for further substantive analysis.

4.10.1 Factor Analysis

After the relevant initial analysis is conducted, factor analysis was used to define the structure of the study constructs. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are two major factor analysis approaches (Field, 2013).

EFA is a statistical technique used in the initial stages of multivariate data analysis to examine the interrelationships among large numbers of variables by ensuring their propensity to be grouped together (Bryman and Bell, 2020). It is a technique that help reduce large data sets into lesser more manageable sets of factors in order to eliminate issues of multicollinearity and improve their measurement quality among other things (Tabachnick and Fidell, 2019b). Particularly, since the scale items were not adopted but adapted, an EFA was carried out to refine and streamline the structure of the constructs/factors before further analysis. The data set was explored in line with the stages advanced by Pallant (2020) which assessed the suitability of the data for factor analysis, extracted the factors, and rotated and interpreted the factors.

4.10.1.1 Assessing the Appropriateness of the Data Set for Factor Analysis

The researcher conducted several tests to ensure the suitability of the data set for analysis, focusing on two key issues: the sample size and the strength of association among the scale items (Pallant, 2011). For sample size adequacy, the researcher followed scholarly recommendations by Hundleby and Nunnally (1968), Tabachnick, Fidell and Ullman (2007), and Hair et al. (2019), which suggested a ratio of 5 to 1 or 10 to 1, meaning five to ten cases for each item to be explored. To verify the strength of association among the scale items, the researcher employed three statistical measures. First, the researcher examined correlation coefficients among items, following Tabachnick, Fidell and Ullman's (2007) recommendation that correlation coefficients should predominantly be greater than 0.3. Second, the researcher used SPSS to generate Bartlett's test of sphericity, ensuring significance at $p < 0.05$ (Bartlett, Kotrlik and Higgins, 2001; Hinton and Salakhutdinov, 2006). Third, the researcher calculated

the Kaiser-Meyer-Oklin (KMO) measure of sampling adequacy. Following Tabachnick, Fidell and Ullman's (2007) guidelines, the researcher used a minimum value of 0.6 ($p \geq 0.6$) as the threshold to determine if the data set was suitable for factor analysis. The researcher ensured that the data set satisfied all three criteria before proceeding with further analysis. These rigorous preliminary analyses helped the researcher establish the robustness of the data set and its appropriateness for the intended statistical analyses. The systematic approach to data verification enhanced the reliability of subsequent findings about women entrepreneurs in Ghana.

4.10.1.2 Factor Extraction, Rotation and Interpretation

Factor extraction comprise of determining the fewest number of factors that best depict the interconnections about the items (Pallant, 2013). For this study to extract an ideal number of factors using the maximum likelihood method assisted by Kaiser's criterion (eigen value rule). By virtue of this rule, all factors with eigen values of 1.0 and above were maintained for further analysis. To aid in the interpretation of the resultant factors. The Promax rotation method with Kaiser normalization was used to assess the number of strong loadings as well as specific items to load considerably onto the various factors/components (Pallant, 2020). The Promax method is an Oblique rotation technique that is ideal for larger data sets, and will afford the researcher the ability to derive a simple structure by ensuring that each item loads strongly on only one component, and each component is represented by a number of high loading items (Tabachnick, Fidell and Ullman, 2007). The loadings, therefore, simply describe the correlation between the items and their factors.

4.10.4 Structural Equation Modelling (SEM)

The researcher conducted a two-stage Structural Equation Modelling (SEM) analysis following the preliminary data analysis procedures and EFA. This choice aligned with McQuitty and Wolf's (2013, p.59) definition of SEM as "a system of equations that

establishes the structure of relationships among observed and unobserved (latent) quantitative variables." The researcher employed SEM as the primary multivariate technique to assess cause and effect relationships among several latent constructs in the study (Hair, Black, Babin, and Anderson, 2019).

In implementing SEM, the researcher followed McIntosh's (2007) approach of testing a conceptual model through statistical methods. The analysis involved two key components: measuring a model that defined the latent variables using observable variables, and developing a structural regression model that linked the latent variables together (Hair et al., 2010). While acknowledging Bagozzi and Yi's (2012) caution about SEM's limitations in proving causality, the researcher used the technique to evaluate the influence of constructs within a fully specified model (Byrne, 2013). The researcher selected SEM to overcome limitations of first-generation statistical methods. This technique enabled simultaneous analysis of complex interrelated dependent relations among variables by combining elements of path analysis, factor analysis, and multiple regression (Lomax, 2013; McQuitty and Wolf, 2013). The researcher incorporated measurement errors within relationships into structural coefficients and measured the unidimensionality, reliability, and validity of each construct in the model (Kline, 2023).

Following Bagozzi and Yi's (2012) guidelines, the researcher used SEM to achieve three key objectives: specifying precise hypotheses and operationalizing constructs, considering reliability of measures in hypothesis testing beyond averaging multi-measures of constructs, and guiding both exploratory and confirmatory research through combined self-insight and modeling skills with theory. The researcher employed SEM to specify, estimate, and test the research model through a causal path diagram that depicted hypothesized interrelationships among study variables. This approach allowed for modification and deletion of causal paths that did not fit with the principal model (Kline, 2023), enabling a comprehensive analysis of

relationships between entrepreneurial ecosystem elements and women entrepreneurs' performance in Ghana.

4.10.4.1 Two-Stage SEM

"There are two widely used approaches in performing SEM: one-stage and two-stage. The one-stage approach processes the analysis of both the measurement and structural models simultaneously (Lomax, 2013; Kline, 2023) while the two-stage approach separates the measurement model and structural model estimation (Hair Jr, Babin and Anderson, 2010). On the basis that the two-stage approach avoids interaction that is needless between constructs during testing of the structural model (Voorhees *et al.*, 2016), this study will use it to test the research model (Souiden, Brahmi and Toumi, 2017).

4.10.5.1 Measurement Model/Confirmatory Factor Analysis (CFA)

At the measurement stage, the measurement model will be specified indicating the relationship between the various constructs and their measures. This will be done by conducting a CFA. As the first stage or the basis of SEM, CFA is “a version of factor analysis in which specific hypotheses about structure and relations between the latent variables that underlie the data are tested” (Field, 2013). CFA will be used to propose relationships between the observed measures and a-priori theoretical pattern of factors and then assess the hypothesized model statistically (Byrne, 2013). The CFA, therefore, shows whether the model matches the actual data that was gathered by examining reliability and validity (convergent and discriminant) (*ibid.*). Convergent validity of the constituents of the research model will be ensured by ascertaining that the measurement items of the various constructs are correlated, and they are also correlated with the constructs they measure (Neuman, 2014). Discriminant validity on the other hand assesses the existence of high correlation between the

various constructs (i.e. above 0.90), as well as empirical differences or co-variation among them (Kline, 2023). Specifically, Average Variance Extracted (AVE) will be computed, and the squared correlations between the constructs were compared and used as indicator of convergent validity and discriminant validity of the research model. Internal consistency of the research model will be confirmed using Composite Reliability (CR), AVE, and Cronbach's alpha. These indicators are discussed in detail in a later section on 'reliability and validity of the research instrument'.

4.10.5.2 Structural Model

At this phase, the structural model is specified, depicting how the various constructs are interrelated (Tabachnick, Fidell and Ullman, 2007). During the structural model specification, the non-structural covariances among the unobserved factors are substituted with the hypothesized structure, and the data is reanalyzed. Alternatively stated, this stage allows for the testing of the hypothesized relationships among the various constructs in the study. The appropriateness of the measurement and structural model will be confirmed using the goodness-of-fit measures, and the significance of the various paths among the constructs and their measures are as well examined using the coefficient parameter estimates (Hair *et al.*, 2010).

4.10.5.3 Evaluating the Fitness of the Model

"Model fitness evaluation involves the interpretation of how suitably the research model fits the empirical data and results. Scholars (such as Hair *et al.*, 2010) have suggested various measures researchers can use to evaluate the general acceptability of both the measurement and structural models in a given research. This procedure is essentially comparative in nature since it involves choosing between various fit indices that subjectively show whether the data matches the theoretically postulated model (Bagozzi and Yi, 2012).

The various goodness-of-fit indices with their cut-off criteria (conventionally acceptable values) proposed by scholars are categorized into three clusters namely, (1) absolute fit indices, (2) comparative fit indices and (3) parsimonious fit indices. The absolute fit indices, also known as the predictive fit indices provide a fundamental assessment of how well the data gathered matches or is close enough to the hypothesized model (Hair *et al.*, 2010). Fit indices commonly used to check for absolute fit include the Chi-square (χ^2) statistics, Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Standardized Root-Mean-Square Residual (SRMR), and Root-Mean-Square-Error of Approximation (RMSEA). These criteria are based on differences between the observed and model-implied correlation or covariance matrix (Byrne, 2013).

The comparative (incremental) fit indices compare the fit of the given research model with an estimated baseline model (null model) which operates under the assumption that all the observed variables are uncorrelated (Hair *et al.*, 2010). The fit indices under this category include the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), the Relative Non-centrality Index (RNI), and the Tucker-Lewis Index (TLI). The parsimonious fit indices, however, permit the researcher to determine which model out of a set of competing models is the most suitable in terms of complexity (Hair *et al.*, 2010). Measures of parsimony fit include the Parsimony-adjusted Normed Fit Index (NFI) and the Parsimony -adjusted Comparative Fit Index (CFI).

In this study, the baseline fit indices used to ascertain the acceptability of the construct measures or how best the measurement and structural model fit the study data include the Root Mean Square Error of Approximation ($RMSEA \leq 0.08$), and the Chi-square/degrees of freedom ($\chi^2/df \leq 2$ or 3). The choice of the Normed Chi-square (χ^2/df) stemmed from scholarly contentions that albeit the χ^2 is a principal measure of absolute fit, it is a function of the sample size, and the difference between the observed and estimated covariance matrices

(Hair *et al.*, 2010). As such the value of the χ^2 increases with increase in sample size causing challenges in achieving model fit. On the basis of this argument, the (χ^2/df) ratio has been suggested as a suitable insulation against sample size influences (Byrne, 2010). The study also employs the Goodness-of-Fit Index ($GFI \geq 0.90$), the Comparative Fit Index ($CFI \geq 0.90$), Incremental Fit Index ($IFI \geq 0.90$), Normed Fit Index ($NFI \geq 0.90$), and the Tucker-Lewis Index ($TLI \geq 0.90$). These indexes were chosen on the basis that they are the universally acceptable criteria in social science research (Byrne, 2013).

4.10.5.4 Moderation Analysis

Moderation refers to the function of a third variable “which partitions a focal independent variable into subgroups that establish its domain of maximal effectiveness in regard to a given dependent variable”(Judd, Yzerbyt and Muller, 2014). Moderation depicts the notion that the extent or level of the effect of an antecedent on an outcome depends on contingency factors; and thus, describes the circumstances under which an effect may vary in size (Bernierth and Aguinis, 2016). In essence, it suggests an interaction effect which can (1) increase the influence of the independent variable on the dependent variable; (2) reduce the influence of the independent on the dependent variable; or (3) reverse the influence of the independent on the dependent variable. Any qualitative or quantitative variable that affects the direction and/or strength of the relationship between a predictor variable and an outcome variable can function as a moderator (Judd, Yzerbyt and Muller, 2014). Two principal approaches to conducting moderation analysis in SEM present in the literature are interactions and multi-group moderations (Boyd and Crawford, 2012). Interactions are used when the moderator variable is continuous, and in such instances, researchers examine the relationship between a predictor (X) and an outcome (Y); a second predictor (Z) hypothesized to be a moderator; and then a product term between X and Z. The estimates or coefficients for the XZ product term then provide information on the presence and magnitude

of the moderating effect (Bernierth and Aguinis, 2016). In multi-group moderations however, the moderator variables are mostly categorical which calls for subgrouping analysis, and a comparison of the resultant estimates across the various subgroups or categories (Boyd and Crawford, 2012). Baron and Kenny (1986) also suggest that in cases where both the independent variable (X) and moderator variable (Z) are continuous, and the researcher believes that the moderator changes the X-Y relationship in a stepwise function, then the moderator variable (Z) can be dichotomized for a multi-group moderation.

As has been reiterated in the previous chapters, the second objective of this study is to assess the moderating effect of entrepreneurial identity on the direct relationship between entrepreneurial ecosystem and performance hence the need to conduct the moderating analysis.

4.11 Reliability and Validity

It is important that the procedures by which researchers assess the credibility and accuracy of their research findings are communicated (Creswell, 2022). This has been argued from the viewpoint that adopting and adapting items from extant literature or prior studies may potentially affect the originality of instruments used for a particular study. According to Creswell (2014), this necessitates the need to assess the validity and reliability of such instruments when conducting data analysis. Reliability and validity, though closely related, are independent concepts on the basis that an instrument that is reliable may not necessarily be valid (Zikmund *et al.*, 2014). On this premise, both reliability and validity were successively assessed to ensure that accurate conclusions can be drawn, and precise generalizations can be made from the findings of this study. The specific approaches to assessing the reliability and validity of the research instrument are explained in the succeeding sub-sections.

4.11.1 Reliability of the Research Instrument

“Reliability explains the assessment of the magnitude of consistency or regularity among the items measuring a construct, which lends credibility to the findings of a study such that these findings could be reproduced (Burns, 2005; Hair *et al.*, 2010). To put this differently, it is the extent to which the research instrument and analysis processes generate coherent replicable findings. From other scholarly viewpoints, reliability depicts the level to which measurement scales are devoid of arbitrary error so that the higher the reliability value, the lower the amount of error (Pallant, 2011; Zikmund *et al.*, 2014). Research in the social sciences have mostly assessed reliability using two dominant approaches namely: internal consistency and test-retest reliability.” Internal consistency “is the degree to which the items that make up the scale are all measuring the same underlying attribute (i.e. the extent to which the items ‘hang together)’” (Pallant, 2011, p.6). Test-retest on other hand, measures the correlation between scores obtained after an instrument is administered to the same group of respondents at two different times in order to test for stability or the degree to which the instrument produces similar outcomes in both successive instances (Hair *et al.*, 2010).

“For the purpose of this thesis, the internal consistency approach to assessing reliability is utilized. Specifically, Cronbach’s Alpha (α) and Composite Reliability (CR) were employed to determine the reliability of the research instrument. Cronbach’s Alpha, which measures the inter-correlation between various items representing a construct, is the predominantly used estimate of the reliability of a multiple item scale (Pallant, 2011). The literature suggests that Cronbach’s Alpha values/estimates closer to 1 show that the instrument and data gathered are very reliable, while coefficients closer to 0 show that the data is not reliable (Pallant, 2011). There are differing suggestions on the acceptable threshold for Cronbach’s Alpha estimates. According to (Malhotra, Agarwal and Peterson, 1996), values between 0.7 and 0.9 are acceptable limits or criteria for reliability while Hair, Ringle and Sarstedt (2012) argues

coefficients of 0.6 and 0.7 to be the lower boundaries for acceptability. Although Cronbach's alpha is the most widely used measure of reliability, it has been contended that its value or estimate is affected by the number of items measuring a construct (Streiner and Kottner, 2014). It is therefore, criticized for not being a sufficient measure of overall reliability of a research instrument since it focuses on individual constructs (Botha and Van der Walddt, 2011).

Owing to the deficiencies of Cronbach's alpha, at the confirmatory stage of data analysis (CFA), Composite Reliability (CR) tests and examination are conducted to complement the Cronbach's Alpha estimates to determine the total reliability of the research instrument. Composite reliability measures the general reliability of a collection of diverse but similar items. According to Hair Jr, Page and Brunsveld, (2019), a composite reliability score that is lower than 0.6 is an indicator of weak internal consistency while indicator values of 0.6 and above are considered acceptable. Evidence of the reliability measures is presented at both the EFA and CFA stages in the next chapter on data analysis.

4.11.2 Validity of the Research Instrument

“Validity describes the match or fit between a construct and its measurement items (Burns, 2005), and assesses the quality of data and its corresponding results (Creswell and Creswell, 2017). Essentially, it represents the accuracy of measurement items for a particular purpose. The main categories of validity commonly used in social science research are face validity, content validity, criterion validity, and construct validity (Neuman, 2014; Pallant, 2020). Face validity concerns how well items add up as a measure of a construct based on the judgements of others with expertise in the area. It is considered the subjective consensus among researchers and practitioners in the particular area of study that the contents of a given scale soundly seem to measure what they intend to measure. Content validity measures the degree to which scale items correctly measure a particular construct by adequately and

representatively capturing all the facets of the conceptual definition of said construct (Neuman, 2014).

Criterion validity relies on outside verification by comparing other measures of the same construct in which the researcher has confidence. Construct validity, however, depicts how well the items measuring each individual construct converge, and how well the items measuring the various separate constructs diverge (Neuman, 2014). By virtue of this explanation, there are two types of construct validity namely, convergent and discriminant validity (Hair, Ringle and Sarstedt, 2011). Discriminant validity shows the degree to which a construct is different from others by ensuring that the items that measure it are unique indicators of the construct (Streiner and Kottner, 2014). It is indicated by the low correlation between the measure of interest and the measures of other constructs. Convergent validity ensures that the constructs identified are truly reflected by their measures, and these measures share a high amount of common variance (Hair *et al.*, 2010).

In this study, the research instrument was validated using face validity, content validity and construct validity. Adhering to the suggestions of researchers such as (Hair *et al.*, 2012; Taherdoost, 2016), that a simple test for face and content validity is to obtain the viewpoints of others knowledgeable in the study area as well as pre-test the research instrument, content and face validity was guaranteed by allowing experts (both academics and practitioners) to review the scales used in the study after which the questionnaire is pilot-tested. Construct validity is also used to detect how well the results obtained using the research instrument fit theoretical expectations (Neuman, 2014). Construct validity is established by analyzing the convergent and discriminant validity (Hair *et al.*, 2010) through the AVE values as well as the comparisons between the square-root of the AVEs and the inter-construct correlations estimated. The suitable limit for AVE score is 0.5 and above (Hair *et al.*, 2010), and results for validity measures are also presented at the CFA stage in next chapter.

4.12 Ethical Considerations

Ethical issues describe the appropriateness of a researcher's conduct concerning the rights of a study's participants and are essential considerations in any research (Phillips *et al.*, 2019). A key ethical issue considered in this study will be to obtain informed consent or the willful agreement of individuals to participate in the research based on their understanding of the purpose and nature of the study. To do this, an application will be submitted to the Rhodes University Ethics Committee (RUESC), where ethical clearance will be sought for the study.

On the basis that informed consent has four elements; disclosure, competence, comprehension, and voluntariness, the protocol consent form issued by the ethics committee will have the researcher detail out the purpose of the study. Besides, the study purpose will be also provided on the questionnaire to steer clear of misunderstanding and lack of confidence. Also, the study will ensure that participants possess some knowledge of the phenomenon being studied, have the ability to provide the information sought by the study, and understand the particular reason they will be to partake in the study. In addition, no specific details related to the identity of the participants will be taken, and because the data will be analyzed quantitatively, matching responses to a specific respondent will be impossible. Finally, the study respondents will be made aware that participation will be voluntary, and they may decline and withdraw from the study at any time without any penalty.

4.13 Chapter Summary

This chapter described the various research methodological approaches used in the study. Arguments for the choice of positivism and its various philosophical assumptions have been presented. Grounded on the arguments made for a positivist paradigmatic position coupled with the objectives of the study, a quantitative and deductive approach is considered the most suitable design. The quantitative research method or approach is presented requiring the discussion of specific methodological issues. In view of this, the chapter established a cross-

sectional survey as the strategy employed in the study. The chapter then clearly described the procedures used in the questionnaire design, respondents' selection, sample size determination, and data collection. The chapter concludes by describing the main analytical methods employed in the study and provides support for their appropriateness in this study. In the next chapter, detailed discussions are presented on data analysis, interpretations and results with a focus on sample characteristics, descriptive statistics, Exploratory Factor Analysis (EFA) and two-stage Structural Equation Modelling (SEM).

CHAPTER FIVE

DATA ANALYSIS AND PRESENTATION OF EMPIRICAL RESULTS

5.1 Introduction

This chapter presents results from the data analysis and includes two preliminary sections and three major analytical sections as discussed in the methodology. The chapter starts off with discussions on sample characteristics. From the sample characteristics discussed, then preliminary data analysis which involved descriptive statistics and exploratory factor analysis (EFA) gets presented. Assessment of common method variance which was conducted during the data exploration phase is subsequently discussed. Results of the confirmatory factor analysis (CFA) for the latent variables are presented with various reliability and validity tests on the scales used at confirmatory stage to validate and substantiate the final model obtained. The third analytical section focuses on the results from the structural model, which tested the study hypotheses depicted in the conceptual framework thus, examining the effect of entrepreneurial ecosystems on women entrepreneurial performance in Ghana. This section includes the test for the moderation effects of entrepreneurial identity on the direct relationship between entrepreneurial ecosystems and women entrepreneurial performance in Ghana. This is followed by a summary of the chapter.

5.1 Response Rate

According to Baruch and Holtom (2008), a response rate analysis is essential to determine whether a study obtained a threshold of participants required to make it valid and effective as well as to be a representative of the targeted population. The total sample size of the study was estimated using the unknown sample size calculation of 95% confidence level with a standard deviation of 0.5 and a margin of 0.05 which gave a total sample size of 384. However, the researcher added 50% of the calculated sample size to account for factors such

as non-response, incomplete questionnaires as well as to increase the overall representativeness of the sample hence the total minimum sample size was 570. The response rate is the percentage of study participants who completed the survey out of the total number of people invited to participate. In this case:

Response rate = (Number of completed surveys) / (Total number of surveys distributed) * 100

Response rate = 413 / 570 * 100

Response rate \approx 72.46%.

This means that out of the 570 women entrepreneurs selected for the study, 413 completed and returned the questionnaire, resulting in a response rate of approximately 72.46%.

When conducting research using online methods for data collection, response rates can vary depending on various factors such as the target population, survey length, incentives, and the nature of the study. While there is no universally agreed-upon standard for an acceptable response rate, several studies and scholars have provided insights into what constitutes an appropriate response rate for online surveys. Nulty (2008) conducted a comparative study of online and paper-based surveys, finding that online surveys typically have lower response rates than paper-based ones. However, he also noted that the quality of responses from online surveys tends to be better, with fewer incomplete or invalid responses. Nulty suggests that a response rate of around 33% for online surveys is considered acceptable, although this can vary depending on the study's context. Manfreda et al. (2008) conducted a meta-analysis of 45 studies comparing response rates between web-based and other survey modes. They found that, on average, web-based surveys had an 11% lower response rate compared to other modes. However, they also noted that response rates for web-based surveys varied widely, ranging from 7% to 88%, depending on the study's design and target population. Fan and Yan (2010) reviewed factors affecting response rates in web-based surveys and suggested that a

response rate of 60% or higher is desirable to ensure the representativeness of the sample. However, they also acknowledged that achieving such high response rates can be challenging, particularly for studies targeting a broad population or those without strong incentives for participation. The response rate of 72.46% achieved in the current study is well above these thresholds, indicating a strong level of participation and representativeness.

5.2 Examination of Missing Data and outliers

The impact of missing data on quantitative research can be serious, leading to biased estimates of parameters, loss of information, decreased statistical power, increased standard errors, and weakened generalizability of findings (Dong and Peng, 2013). Enders (2006) stated that a missing rate of 15% to 20% was common in educational and psychological studies. The proportion of missing data is directly related to the quality of statistical inferences. Yet, there is no established cutoff from the literature regarding an acceptable percentage of missing data in a data set for valid statistical inferences. Schafer (1999) asserted that a missing rate of 5% or less is inconsequential. Bennett (2001) maintained that statistical analysis is likely to be biased when more than 10% of data are missing. As indicated in Table 5.1, out of the 88 variables, only 9 variables have missing values, namely EDU4, CUL1, CUL2, CUL3, INN1, INN2, INN7, MAR1, MAR3, MAR4, MAR6, MAR7, OPE1, OPE2, OPE5, and OPE6. The number of missing values for these variables ranges from 1 to 2, which is relatively low compared to the total sample size of 413. The total number of missing values across all variables is 21, which accounts for approximately 5.08% of the total data points (21 out of 413 observations \times 88 variables = 36,344 data points). Given the small number of missing values (21) relative to the total number of data points (36,344), the impact of missing data on the overall study results is likely to be minimal. The missing data accounts for only 0.06% of the total data points (21/36,344), which is a very small proportion.

Table 5.1: Missing Data Value analysis

Codes	N	Mean	Std. Deviation	Missing	
				Count	Percent
Age	413	2.373	1.229	0	0.0
Education	413	3.879	1.581	0	0.0
Marital	413	2.433	1.398	0	0.0
Dependents	413	2.649	1.034	0	0.0
Sector	413	2.939	1.608	0	0.0
size	413	1.738	0.818	0	0.0
Experience	413	1.186	0.390	0	0.0
prior work	413	2.165	0.899	0	0.0
Motivation	413	1.123	0.329	0	0.0
growth intention	413	1.286	0.452	0	0.0
ACF1	413	2.315	1.434	0	0.0
ACF2	413	2.433	1.398	0	0.0
ACF3	413	2.998	1.413	0	0.0
ACF4	413	2.864	1.651	0	0.0
ACF5	413	2.935	1.505	0	0.0
ACF6	413	3.116	1.069	0	0.0
ACF7	413	2.843	1.406	0	0.0
EDU1	413	2.339	1.328	0	0.0
EDU2	413	2.787	1.534	0	0.0
EDU3	413	3.056	1.446	0	0.0
EDU4	412	2.648	1.327	1	0.2
EDU5	413	2.988	1.417	0	0.0
EDU6	413	3.395	1.418	0	0.0
EDU7	413	3.278	1.452	0	0.0
INF1	413	3.058	1.487	0	0.0
INF2	413	3.203	1.661	0	0.0
INF3	413	3.165	1.997	0	0.0
INF4	413	2.465	1.444	0	0.0
INF5	413	3.254	1.475	0	0.0
INF6	413	3.349	1.353	0	0.0
INF7	413	3.264	1.413	0	0.0
NET1	413	2.959	1.448	0	0.0
NET2	413	3.017	1.354	0	0.0
NET3	413	3.017	1.422	0	0.0
NET4	413	3.051	1.461	0	0.0
NET5	413	3.194	1.364	0	0.0
NET6	413	2.787	1.420	0	0.0
NET7	413	2.448	1.367	0	0.0
REG1	413	2.949	1.428	0	0.0
REG2	413	2.470	1.405	0	0.0
REG3	413	3.412	1.485	0	0.0
REG4	413	3.593	1.284	0	0.0
REG5	413	3.521	1.284	0	0.0
REG6	413	3.688	1.380	0	0.0
REG7	413	3.308	1.277	0	0.0
CUL1	412	3.439	1.393	1	0.2

CUL2	412	3.333	1.347	1	0.2
CUL3	411	3.443	1.014	2	0.5
CUL4	413	3.349	1.322	0	0.0
CUL5	412	3.119	1.357	1	0.2
CUL6	413	3.404	1.352	0	0.0
CUL7	413	3.334	1.385	0	0.0
INN1	411	3.246	1.275	2	0.5
INN2	411	3.448	1.297	2	0.5
INN3	413	3.627	1.231	0	0.0
INN4	413	3.557	1.283	0	0.0
INN5	413	3.351	1.406	0	0.0
INN6	413	3.598	1.564	0	0.0
INN7	412	3.619	1.930	1	0.2
MAR1	412	3.112	1.446	1	0.2
MAR2	413	3.366	1.423	0	0.0
MAR3	412	3.636	1.237	1	0.2
MAR4	412	3.483	1.339	1	0.2
MAR5	413	2.903	1.305	0	0.0
MAR6	412	3.107	1.171	1	0.2
MAR7	411	3.017	1.240	2	0.5
OPE1	412	3.019	1.316	1	0.2
OPE2	412	3.192	1.202	1	0.2
OPE3	413	3.073	1.246	0	0.0
OPE4	413	2.821	1.312	0	0.0
OPE5	412	3.136	1.205	1	0.2
OPE6	412	2.820	1.302	1	0.2
OPE7	413	2.947	1.370	0	0.0
EII1	413	2.339	1.399	0	0.0
EII2	413	2.450	1.360	0	0.0
EII3	413	3.029	1.338	0	0.0
EII4	413	2.828	1.585	0	0.0
EII5	413	2.864	1.491	0	0.0
EII6	413	2.981	1.125	0	0.0
EIV1	413	2.867	1.388	0	0.0
EIV2	413	2.409	1.313	0	0.0
EIV3	413	2.840	1.504	0	0.0
EIV4	413	3.143	1.459	0	0.0
EIV5	413	2.821	1.366	0	0.0
EIS1	413	3.097	1.472	0	0.0
EIS2	413	3.119	1.422	0	0.0
EIS3	413	2.961	1.497	0	0.0
EIS4	413	2.751	1.468	0	0.0
EIS5	413	3.143	1.385	0	0.0
Total				21	5.08

Source: (Author, 2024)

5.3 Non-Response Bias

A non-response bias is an error a research expects to make in estimating the characteristics of a population based on a sample survey of data (Gummer *et al.*, 2022). It is founded on the understanding that there are material distinctions between survey respondents and nonrespondents, and that the former provide an inaccurate representation of the latter's characteristics. Nonresponse bias is a major problem for studies that rely on participants' volitional responses to research questions; it undermines participants' trust in the study's findings (Peytchev, 2013).

Following the recommendations of Rogelberg and Stanton (2007), the study compared some demographic variables and independent variables using Levene test of Homogeneity. The Levene statistics and their corresponding significant values are presented in Table 5.2 below. The variables selected for the homogeneity of variance analysis include education, marital status, dependents, sector, size, various market performance indicators (MAR1, MAR3, MAR4, MAR5, MAR6), and operational performance indicators (OPE1, OPE2, OPE3, OPE4, OPE5, OPE6, OPE7). These variables were chosen because they are likely to have an impact on women's entrepreneurial activities and their business performance. Education is an important variable as it can influence women's knowledge, skills, and confidence in starting and running a business. Marital status and dependents may affect women's ability to dedicate time and resources to their entrepreneurial ventures. The sector and size of the business can also impact women's entrepreneurial experiences and outcomes.

Market performance indicators, such as meeting market needs, marketing effectiveness, market share growth, customer retention, customer satisfaction, premium pricing, and customer base expansion, are crucial for assessing the success and competitiveness of women-led businesses. Operational performance indicators, including revenue and profit growth, cost control, management effectiveness, process efficiency, information systems

implementation, growth strategies, and quality control, are essential for evaluating the internal capabilities and performance of women-led businesses. By conducting the homogeneity of variance analysis on these variables, the study is able to determine if the variances are equal across different groups (e.g., based on education levels, marital status, sectors, or business sizes). This is important because if the variances are not equal, it may indicate that the groups have different characteristics or face different challenges, which could impact their entrepreneurial outcomes.

The results of the homogeneity of variance analysis show that for most variables, the variances are not significantly different across the groups ($p > 0.05$). This suggests that the assumption of equal variances is met, and the groups can be compared using statistical tests that assume equal variances, such as ANOVA. However, for MAR3, the trimmed mean-based Levene statistic has a p-value of 0.042, which is less than 0.05. This indicates that the variances for MAR3 may not be equal across the groups, and hence the researcher was cautious in the interpretation of the results related to this variable.

In essence, the variables chosen for the homogeneity of variance analysis in this study on women entrepreneurship are relevant and important for understanding the factors that influence women's entrepreneurial activities and business performance. The results of the analysis provide insights into the equality of variances among different groups, which is crucial for selecting appropriate statistical tests and interpreting the findings accurately.

Table 5.2: Test of Homogeneity of Variance

Variables		Levene Statistic	df1	df2	Sig.
Education	Based on Mean	0.284	4	408	0.888
	Based on Median	0.337	4	408	0.853
	Based on Median and with adjusted df	0.337	4	406.043	0.853
	Based on trimmed mean	0.349	4	408	0.845
Marital	Based on Mean	1.403	4	408	0.232
	Based on Median	1.131	4	408	0.341
	Based on Median and with adjusted df	1.131	4	383.915	0.341
	Based on trimmed mean	1.593	4	408	0.175
Dependents	Based on Mean	0.874	4	408	0.480
	Based on Median	1.404	4	408	0.232
	Based on Median and with adjusted df	1.404	4	391.413	0.232
	Based on trimmed mean	0.985	4	408	0.416
Sector	Based on Mean	1.242	4	408	0.292
	Based on Median	0.901	4	408	0.463
	Based on Median and with adjusted df	0.901	4	385.162	0.463
	Based on trimmed mean	1.235	4	408	0.295
Size	Based on Mean	0.567	4	408	0.687
	Based on Median	0.353	4	408	0.842
	Based on Median and with adjusted df	0.353	4	342.010	0.842
	Based on trimmed mean	0.451	4	408	0.772
MAR1	Based on Mean	0.941	4	407	0.440
	Based on Median	1.701	4	407	0.149
	Based on Median and with adjusted df	1.701	4	371.387	0.149
	Based on trimmed mean	1.167	4	407	0.325
MAR3	Based on Mean	1.906	4	407	0.109
	Based on Median	1.160	4	407	0.328
	Based on Median and with adjusted df	1.160	4	391.676	0.328
	Based on trimmed mean	2.497	4	407	0.042
MAR4	Based on Mean	1.303	4	407	0.268
	Based on Median	1.331	4	407	0.258
	Based on Median and with adjusted df	1.331	4	401.183	0.258
	Based on trimmed mean	1.631	4	407	0.165
MAR5	Based on Mean	0.899	4	408	0.465
	Based on Median	0.717	4	408	0.581

	Based on Median and with adjusted df	0.717	4	334.389	0.581
	Based on trimmed mean	0.897	4	408	0.465
MAR6	Based on Mean	1.480	4	407	0.207
	Based on Median	0.304	4	407	0.875
	Based on Median and with adjusted df	0.304	4	312.071	0.875
	Based on trimmed mean	1.418	4	407	0.227
OPE1	Based on Mean	1.083	4	407	0.365
	Based on Median	1.525	4	407	0.194
	Based on Median and with adjusted df	1.525	4	346.115	0.194
	Based on trimmed mean	1.120	4	407	0.347
OPE2	Based on Mean	1.367	4	407	0.244
	Based on Median	0.394	4	407	0.813
	Based on Median and with adjusted df	0.394	4	320.463	0.813
	Based on trimmed mean	1.247	4	407	0.290
OPE3	Based on Mean	0.982	4	408	0.417
	Based on Median	1.086	4	408	0.363
	Based on Median and with adjusted df	1.086	4	387.587	0.363
	Based on trimmed mean	0.965	4	408	0.426
OPE4	Based on Mean	0.257	4	408	0.906
	Based on Median	0.160	4	408	0.959
	Based on Median and with adjusted df	0.160	4	328.590	0.959
	Based on trimmed mean	0.260	4	408	0.903
OPE5	Based on Mean	0.433	4	407	0.785
	Based on Median	0.477	4	407	0.752
	Based on Median and with adjusted df	0.477	4	383.780	0.752
	Based on trimmed mean	0.414	4	407	0.799
OPE6	Based on Mean	0.298	4	407	0.879
	Based on Median	0.307	4	407	0.873
	Based on Median and with adjusted df	0.307	4	358.068	0.873
	Based on trimmed mean	0.299	4	407	0.879
OPE7	Based on Mean	1.129	4	408	0.343
	Based on Median	0.760	4	408	0.552
	Based on Median and with adjusted df	0.760	4	340.476	0.552
	Based on trimmed mean	1.129	4	408	0.342

Source: (Author, 2024)

5.4 Sample Characteristics

The demographic findings (Table 5.3) provide valuable insights into the characteristics of the sample population and their potential implications for assessing the impact of Ghana's entrepreneurial ecosystem on women entrepreneurial performance, considering entrepreneurial identity as a moderator. In this study the demographic information was determined with age in years, highest level of education, marital status, number of dependents, sector of the economy, size of business as well as the experience of the woman entrepreneur.

The distribution of participants across different age groups indicates that the sample includes a diverse range of age cohorts. This demographic factor is relevant as it may influence women's entrepreneurial performance and their engagement with the entrepreneurial ecosystem (Neumeyer, Santos and Morris, 2019). Sajilan et al. (2015) argued that younger women (18-25 years and 25-35 years) may bring fresh perspectives and innovative ideas, while older women (56 years and above) may draw upon their experience and networks (Peter & Muniyithya, 2015). Considering age diversity in the analysis can provide insights into the varying needs and challenges faced by women entrepreneurs across different life stages. The majority of the women entrepreneurs (31.5%) fall within the age group of 18-25 years, followed by 25-35 years (25.9%). This suggests that a significant portion of the participants are young entrepreneurs. The representation of older age groups, such as 46-55 years (14.0%) and 56 years and above (6.1%), is comparatively lower.

The education level of women entrepreneurs is an important factor that can influence their entrepreneurial performance and ability to navigate the entrepreneurial ecosystem. The distribution of participants across different educational levels suggests a varied skill set and

knowledge base among women entrepreneurs. Women with higher levels of education (Higher National Diploma, bachelor's degree, and Master's Degree) may possess specialized expertise and access to resources, potentially impacting their entrepreneurial success. On the other hand, women with lower levels of education (No formal education, Basic/Primary Education) may face unique barriers that need to be considered in assessing their performance within the ecosystem. The study results shows that the majority of the women entrepreneurs have completed Higher National Diploma (27.1%), followed by Vocational Education (20.8%). A smaller proportion of participants have bachelor's degrees (11.9%) and Master's Degrees (2.4%). Interestingly, 9.7% of the participants have no formal education, highlighting the diverse educational backgrounds of the women entrepreneurs.

The largest group of women entrepreneurs are single and never married (36.1%), followed by married (20.8%), divorced (19.6%), cohabitating (12.8%), and separated (10.7%). The marital status of women entrepreneurs can influence their entrepreneurial performance and their ability to balance work and personal responsibilities. The distribution of participants reveals a mix of marital statuses, with a significant proportion being single and never married. This demographic factor may reflect the flexibility and autonomy that single women have in pursuing entrepreneurship. However, it is important to consider the potential challenges faced by married, divorced, separated, and cohabitating women in terms of juggling family responsibilities and their impact on entrepreneurial performance.

A significant proportion of the women entrepreneurs have 1-2 dependents (42.6%), followed by those with 3-4 dependents (27.6%). This indicates that many of the participants have family responsibilities alongside their entrepreneurial ventures. The number of dependents that women entrepreneurs have can significantly affect their ability to focus on their businesses and engage with the entrepreneurial ecosystem. The majority of participants in the sample have 1-2 dependents, which suggests that many women entrepreneurs have familial

responsibilities that may impact their time, financial resources, and decision-making. Understanding the dynamics of balancing entrepreneurship with caregiving responsibilities can shed light on the challenges and support needs of women entrepreneurs within Ghana's entrepreneurial ecosystem.

The women entrepreneurs are engaged in various sectors, with the highest representation in Retail (24.7%), followed by Agriculture (20.6%), Manufacturing (18.6%), Wholesale (17.9%), Technology (9.7%), and Services (8.5%). This diverse representation allows for a comprehensive understanding of the entrepreneurial ecosystem across different sectors. The distribution of participants across different sectors of the economy provides insights into the industry representation of women entrepreneurs. The presence of women entrepreneurs in sectors such as retail, agriculture, manufacturing, wholesale, services, and technology highlights the diversity of entrepreneurial ventures in Ghana. Analyzing the impact of the entrepreneurial ecosystem on women's performance across these sectors provide sector-specific insights and may inform targeted interventions to enhance women's entrepreneurial success within each industry.

The size of women entrepreneurs' businesses, as indicated by the number of employees, is an important factor to consider in assessing their performance within the entrepreneurial ecosystem. The majority of participants have micro-sized businesses (1-5 employees), followed by small-sized businesses (6-20 employees) and medium-sized businesses (21-100 employees). This distribution suggests that the sample predominantly consists of women entrepreneurs running smaller-scale ventures. Exploring the impact of the entrepreneurial ecosystem on women's performance and growth potential across different business sizes can provide insights into the scalability challenges faced by women entrepreneurs in Ghana.

The distribution of participants based on their experience as entrepreneurs highlights that the majority have less than one year of experience. This finding suggests a relatively high number of early-stage women entrepreneurs in the sample. Analysing the impact of the entrepreneurial ecosystem on their performance can provide insights into the support mechanisms required to facilitate their transition from nascent to established entrepreneurs. Additionally, considering women entrepreneurs with longer experience can help understand the evolution of their performance and the role of the entrepreneurial ecosystem in their sustained success.

Overall, these demographic findings provide a foundation for understanding the diverse characteristics of women entrepreneurs in Ghana and their potential implications for assessing the impact of the entrepreneurial ecosystem on their performance. By considering these demographic factors, the study can delve deeper into the unique challenges, support needs, and opportunities for enhancing women's entrepreneurial success within Ghana's entrepreneurial ecosystem. The findings can inform targeted policies, programs, and interventions aimed at promoting gender equality and inclusive entrepreneurship in the country.

Table 5.3: Demographic Information of Respondents

Measures	Frequency	Valid Percent
<i>Age</i>		
18-25 years	130	31.5
25-35 years	107	25.9
36-45 years	93	22.5
46-55 years	58	14.0
56 years and above	25	6.1
Total	413	100.0
<i>Highest level of education</i>		
No formal education	40	9.7
Basic /Primary Education	54	13.1
Secondary school Education	62	15.0
Vocational Education	86	20.8

Higher National Diploma	112	27.1
Bachelor's Degree	49	11.9
Master's Degree	10	2.4
Total	413	100.0
<i>Marital level</i>		
Single and never married	149	36.1
Married	86	20.8
Divorced	81	19.6
Separated	44	10.7
cohabitating	53	12.8
Total	413	100.0
<i>Number of Dependents</i>		
No dependent	39	9.4
1-2 dependents	176	42.6
3-4 dependents	114	27.6
5-7 dependents	59	14.3
8-10 dependents	25	6.1
Total	413	100.0
<i>Sector of the economy</i>		
Retail	102	24.7
Agriculture	85	20.6
manufacturing	77	18.6
wholesale	74	17.9
services	35	8.5
technology	40	9.7
Total	413	100.0
<i>Size of Business</i>		
Micro (1-5 employees)	203	49.2
small (6-20 employees)	117	28.3
medium (21-100 employees)	93	22.5
Total	413	100.0
<i>Experience as an entrepreneur</i>		
Less than 1 year	336	81.4
1-3 years	77	18.6
Total	413	100.0

Source: (Researcher, 2024)

5.5 Experience, motivation, and growth intention of Ghanaian women entrepreneurs

The findings related to prior work experience, motivation, and growth intention provide valuable insights into the characteristics and aspirations of women entrepreneurs within the context of Ghana's entrepreneurial ecosystem (Table 5.4). The distribution of participants

based on their prior work experience reveals that a significant proportion of women entrepreneurs have no prior industry experience (49.9%). This suggests that a considerable number of women are venturing into entrepreneurship without prior knowledge or experience in the specific industry they are entering. On the other hand, a notable portion of participants (16.7%) have previously worked in the same industry. This finding is relevant to understanding the impact of prior work experience on women's entrepreneurial performance within the ecosystem. Exploring how prior work experience influences the performance, decision-making, and resource utilization of women entrepreneurs can provide insights into the role of industry-specific knowledge and expertise in their success. Given that a significant proportion of women entrepreneurs in the sample are first-time entrepreneurs (33.4%) and have no prior industry experience (49.9%), it is crucial to provide targeted support, training, and mentorship programs to enhance their entrepreneurial performance. The findings highlight the need for capacity-building initiatives that equip novice entrepreneurs with industry-specific knowledge, skills, and networks to navigate the entrepreneurial ecosystem effectively.

Most participants in the sample (87.7%) are driven by opportunity rather than necessity when engaging in entrepreneurship. This suggests that women entrepreneurs in Ghana are primarily motivated by the perceived opportunities for growth, innovation, and financial success that the entrepreneurial ecosystem offers. Understanding the impact of opportunity-driven motivation on women's entrepreneurial performance can shed light on the factors that drive their engagement, persistence, and success within the ecosystem. Additionally, the study can explore the challenges faced by the minority of women entrepreneurs (12.3%) who are necessity-driven, as their motivations may differ and require targeted support to overcome barriers and achieve sustainable performance. Furthermore, understanding that most women entrepreneurs are driven by opportunity can guide policy and program development to

capitalize on this motivation. Creating an enabling environment that fosters entrepreneurship, encourages innovation, and provides access to resources, networks, and market opportunities can further fuel women's entrepreneurial performance and contribute to economic growth.

The distribution of participants' growth intentions indicates that a significant proportion (71.4%) of women entrepreneurs are content with staying small in terms of business size. However, a notable portion (28.6%) expresses a desire for high growth and expansion. This finding is relevant to understanding the aspirations and goals of women entrepreneurs within the entrepreneurial ecosystem. Analysing the impact of growth intention on women's entrepreneurial performance can provide insights into the factors that influence their decision-making, resource allocation, and strategies for scaling their businesses. Additionally, exploring the role of the entrepreneurial ecosystem in facilitating or impeding the growth intentions of women entrepreneurs can inform policies and initiatives aimed at fostering a supportive environment for sustainable growth. Recognizing that women entrepreneurs have varying growth intentions is essential for designing inclusive policies and programs. While some women may prefer to stay small, others aspire for high growth. Providing tailored support mechanisms, such as access to finance, mentoring, and networking opportunities, can help women entrepreneurs achieve their growth aspirations and contribute to the overall economic development of Ghana.

By considering the findings related to prior work experience, motivation, and growth intention within the context of the study's main purpose, policymakers, ecosystem enablers, and support organizations can gain valuable insights into the dynamics of women's entrepreneurial performance in Ghana. The implications derived from these findings can inform evidence-based interventions and strategies that foster an inclusive and supportive entrepreneurial ecosystem, enabling women entrepreneurs to thrive and contribute to the country's economic growth and development.

Table 5.4: Experience, motivation, and growth intention

Measures	Frequency	Valid Percent
<i>Prior work</i>		
First-time entrepreneur	138	33.4
previously worked in same industry	69	16.7
no prior industry experience	206	49.9
Total	413	100.0
<i>Motivation</i>		
Opportunity-driven	362	87.7
necessity-driven	51	12.3
Total	413	100.0
<i>Growth Intention</i>		
Content staying small	295	71.4
planning high growth and expansion	118	28.6
Total	413	100.0

Source: (Author, 2024)

5.6 Descriptive Statistics

Scholars (Hair et al., 2010; Pallant, 2011) noted that the importance of first conducting descriptive analysis on research data in the social sciences so as to control the violation of assumptions necessary for major statistical tests. Descriptive statistics are numerical and graphical methods used to summarise data. Pallant (2011) and Zikmund *et al.* (2014) point to measures of central tendency such as mean, median and mode, and measures of dispersions such as standard deviation, skewness and kurtosis as relevant numerical descriptive statistics used to summarise research data. Table 5.5 presents the descriptive statistics of the various measurement/scale items of the study constructs from the survey instrument that are used for data analysis.

Women's entrepreneurship plays a crucial role in driving economic growth, creating jobs, and promoting gender equality. However, women entrepreneurs often face unique challenges and barriers that can impact their entrepreneurial performance. This study explores various factors influencing women's entrepreneurship and entrepreneurial performance using a comprehensive set of variables, including access to finance, education, infrastructure, networking, government regulations, culture, innovation, market performance, operational performance, and entrepreneurial identity.

Access to finance is a critical factor for women entrepreneurs to start, grow, and sustain their businesses. The study found that women entrepreneurs have moderate access to financial resources, with mean scores ranging from 2.315 to 3.116 (SD = 1.069 to 1.651). While there are some available options, such as personal resources and crowdfunding platforms, there is room for improvement in areas like bank financing, microfinance, and government programs. Policymakers and financial institutions should focus on providing more accessible and tailored financing options for women-led ventures to address this gap.

Entrepreneurship education and training are essential for developing the skills and knowledge necessary for successful entrepreneurship. The study revealed moderate levels of access to entrepreneurship education and training, with mean scores ranging from 2.339 to 3.395 (SD = 1.328 to 1.534). University entrepreneurship centers and incubators/accelerators provide relatively better support compared to other educational initiatives. Strengthening these programs and increasing their accessibility can enhance women's entrepreneurial capabilities and success.

Adequate infrastructure is crucial for the smooth operation and growth of businesses. The study found moderate levels of infrastructure support for women entrepreneurs, with mean scores ranging from 2.465 to 3.349 (SD = 1.353 to 1.997). While reliable electricity,

telecommunications, and access to raw materials and support services are relatively better, there is a need for improvement in areas such as co-working spaces, incubators, and transportation infrastructure. Governments should invest in developing a conducive environment for women entrepreneurs through targeted infrastructure initiatives.

Networking is vital for accessing resources, advice, and collaborations in the entrepreneurial ecosystem. The study revealed moderate levels of networking opportunities and support for women entrepreneurs, with mean scores ranging from 2.448 to 3.194 (SD = 1.354 to 1.461). Women entrepreneurs have relatively better access to personal networks and mentors compared to broader business networks and male business leaders' support. Strengthening women's business associations, promoting female role models, and encouraging male business leaders to support women entrepreneurs can enhance networking opportunities and benefits.

Favorable government regulations and policies can create an enabling environment for women's entrepreneurship. The study found moderate to relatively high perceptions of regulatory support, with mean scores ranging from 2.470 to 3.688 (SD = 1.277 to 1.485). Tax incentives, intellectual property regulations, and government contracts are areas of relative strength. Policymakers should focus on simplifying business registration processes, providing regulatory compliance support, and promoting women's access to government contracts and procurement opportunities to further enhance the regulatory environment.

A supportive cultural environment is essential for encouraging and legitimizing women's entrepreneurship. The study revealed relatively positive cultural perceptions towards women entrepreneurs, with mean scores ranging from 3.119 to 3.443 (SD = 1.014 to 1.393). Successful businesswomen's media portrayal and women supporting each other are areas of relative strength. Promoting positive media representations, family support, and investor

confidence in women-led ventures can further enhance the cultural acceptance and celebration of women entrepreneurs.

Innovation is key to creating competitive advantages and driving business growth. The study found relatively high levels of innovation engagement among women entrepreneurs, with mean scores ranging from 3.246 to 3.627 (SD = 1.231 to 1.930). Women entrepreneurs actively seek new ideas, incorporate new technologies, and focus on social and environmental benefits. Encouraging women entrepreneurs to collaborate with partners and access support for developing innovations can further enhance their entrepreneurial performance.

Strong market and operational performance are essential for the success and sustainability of women-led ventures. The study revealed moderate to relatively high market performance, with mean scores ranging from 2.903 to 3.636 (SD = 1.171 to 1.446), and moderate levels of operational efficiency and effectiveness, with mean scores ranging from 2.820 to 3.192 (SD = 1.202 to 1.370). Growing market share, customer loyalty, cost control, and information systems implementation are areas of relative strength. Focusing on meeting well-defined market needs, effective marketing, providing high-value products/services, and streamlining operations can further enhance women entrepreneurs' performance.

A strong entrepreneurial identity can motivate and guide women entrepreneurs' actions and decisions. The study found moderate levels of entrepreneurial self-perception and identity, with mean scores ranging from 2.339 to 3.143 (SD = 1.125 to 1.585). Access to financing and industry knowledge in the local environment are areas of relative strength. Providing access to networks, mentoring, and supportive socio-cultural environments can further strengthen women's entrepreneurial identity and aspirations.

Table 5.5: Descriptive Statistics

Measures	Item Code	Mean	Std. Deviation	Median	Skewness	Kurtosis
Access to finance		2.786	1.411			
I have sufficient access to financial resources to start my business.	ACF1	2.315	1.434	2.000	0.651	0.240
I am able to obtain business financing from banks and other financial institutions.	ACF2	2.433	1.398	2.000	0.566	0.240
Microfinance institutions provide loans that meet my business needs.	ACF3	2.998	1.413	3.000	-0.048	0.240
Government small business financing programs are available to me.	ACF4	2.864	1.651	3.000	0.094	0.240
I have access to angel investors and venture capital.	ACF5	2.935	1.505	3.000	0.494	0.240
Crowdfunding platforms allow me to raise funds for my business.	ACF6	3.116	1.069	3.000	-0.113	0.240
I have personal resources I can invest in my business.	ACF7	2.843	1.406	3.000	0.050	0.240
Education		2.927	1.417			
Entrepreneurship education programs are available to me.	EDU1	2.339	1.328	2.000	0.528	0.240
I have access to business management training.	EDU2	2.787	1.534	3.000	0.175	0.240
Mentorship opportunities exist to provide me guidance.	EDU3	3.056	1.446	3.000	-0.165	0.240
There are networking events for me to develop professional relationships.	EDU4	2.648	1.327	3.000	0.215	0.240
I have access to online education platforms for skills development.	EDU5	2.988	1.417	3.000	-0.030	0.240
University entrepreneurship centres provide support for my	EDU6	3.395	1.418	4.000	-0.454	0.240

business.

Incubators and accelerators assist me with training and resources	EDU7	3.278	1.452	3.000	-0.326	0.240
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Infrastructure

3.108 1.547

My community has co-working spaces, incubators and accelerators to support my business.	INF1	3.058	1.487	3.000	-0.176	0.240
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There is reliable electricity and telecommunications infrastructure where I operate.	INF2	3.203	1.661	3.000	3.926	0.240
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I have access to transportation infrastructure to distribute and sell my products/services.	INF3	3.165	1.997	3.000	8.039	0.240
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Government programs exist to help me access equipment, technology and facilities.	INF4	2.465	1.444	2.000	0.421	0.240
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Affordable real estate options are available for my business operations.	INF5	3.254	1.475	4.000	-0.422	0.240
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I can readily access raw materials, inventory and other inputs.	INF6	3.349	1.353	4.000	-0.410	0.240
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Support services like legal, accounting, IT and marketing help are available.	INF7	3.264	1.413	3.000	-0.387	0.240
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Networking

2.925 1.405

There are strong women's business associations and networks.	NET1	2.959	1.448	3.000	-0.130	0.240
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I have a network of fellow entrepreneurs for advice and collaboration.	NET2	3.017	1.354	3.000	-0.090	0.240
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Mentors are available through professional associations and non-profits.	NET3	3.017	1.422	3.000	-0.086	0.240
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Female role models and success stories inspire and guide me.	NET4	3.051	1.461	3.000	-0.196	0.240
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My friends and family	NET5	3.194	1.364	3.000	-0.302	0.240
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provide connections and referrals.							
I have access to business networks beyond my immediate contacts.	NET6	2.787	1.42	3.000	0.151	0.240	
Male business leaders support and promote women entrepreneurs.	NET7	2.448	1.367	2.000	0.385	0.240	
Government Regulations		3.277	1.363				
Government policies encourage and support women's entrepreneurship.	REG1	2.949	1.428	3.000	-0.046	0.240	
The legal process for registering and licensing a business is straightforward.	REG2	2.47	1.405	2.000	0.445	0.240	
Labor regulations are favorable for me to hire employees.	REG3	3.412	1.485	4.000	-0.498	0.240	
I can access government contracts and procurement opportunities.	REG4	3.593	1.284	4.000	-0.616	0.240	
Intellectual property regulations protect my innovations and ideas.	REG5	3.521	1.284	4.000	-0.544	0.240	
Tax incentives and exemptions provide benefits for my small business.	REG6	3.688	1.38	4.000	-0.790	0.240	
Government programs provide regulatory compliance support.	REG7	3.308	1.277	4.000	-0.402	0.240	
Culture		3.346	1.31				
My culture encourages and celebrates women entrepreneurs.	CUL1	3.439	1.393	4.0000	-0.599	0.240	
Families support women starting and running businesses.	CUL2	3.333	1.347	4.000	-0.406	0.240	
Successful businesswomen are portrayed positively in the media.	CUL3	3.443	1.014	3.000	-0.144	0.240	
Women helping other women succeed is part of our culture.	CUL4	3.349	1.322	4.000	-0.421	0.240	
Investors have confidence in and provide capital to women-led ventures.	CUL5	3.119	1.357	3.000	-0.199	0.240	
Customers are receptive to buying products/services from women-owned	CUL6	3.404	1.352	4.000	-0.468	0.240	

businesses.						
Male business leaders recognize the talents and skills of women entrepreneurs.	CUL7	3.334	1.385	4.000	-0.455	0.240
Innovation		3.492	1.426			
I actively seek new ideas and opportunities for innovation.	INN1	3.246	1.275	3.500	-0.295	0.240
I have introduced new products, services or processes to differentiate my business.	INN2	3.448	1.297	4.000	-0.511	0.240
I incorporate new technologies to enhance my offerings and operations.	INN3	3.627	1.231	4.000	-0.656	0.240
I have made innovations focused on social and environmental benefits.	INN4	3.557	1.283	4.000	-0.612	0.240
I regularly implement small experiments and prototypes to test new concepts.	INN5	3.351	1.406	4.000	-0.436	0.240
I collaborate with partners, universities and researchers to access innovations.	INN6	3.598	1.564	4.000	4.330	0.240
I have received patents, grants or other support to develop innovations.	INN7	3.619	1.93	4.000	8.420	0.240
Market Performance		3.232	1.309			
My products/services meet a well-defined market need.	1-Mar	3.112	1.446	3.000	-0.259	0.240
My marketing is effective in reaching and attracting new customers.	2-Mar	3.366	1.423	4.000	-0.537	0.240
My market share has grown over the past 3 years.	3-Mar	3.636	1.237	4.000	-0.589	0.240
My customer retention and loyalty is high.	4-Mar	3.483	1.339	4.000	-0.535	0.240
My customers are satisfied with the value they receive from my products/services.	5-Mar	2.903	1.305	3.000	0.055	0.240
My products/services command premium pricing in their market.	6-Mar	3.107	1.171	3.000	0.066	0.240

I have expanded my customer base into new market segments and regions.	7-Mar	3.017	1.24	3.000	0.060	0.240
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Operational Performance

		3.001	1.279			
I have achieved consistent revenue and profit growth.	OPE1	3.019	1.316	3.000	0.028	0.240
My costs are well-controlled.	OPE2	3.192	1.202	3.000	-0.044	0.240
I have an effective management team in place.	OPE3	3.073	1.246	3.000	0.006	0.240
My operations processes are efficient and productive.	OPE4	2.821	1.312	3.000	0.101	0.240
I have successfully implemented information systems for managing my business.	OPE5	3.136	1.205	3.000	-0.028	0.240
I have clear strategies and plans to guide my business growth.	OPE6	2.82	1.302	3.000	0.137	0.240
I have effective quality control processes.	OPE7	2.947	1.37	3.000	0.045	0.240

Entrepreneurial Identity-Individual antecedents

		2.749	1.383			
“I often think about becoming an entrepreneur”	EII1	2.339	1.399	2.000	0.545	0.240
“I would like to see myself as an entrepreneur”	EII2	2.45	1.36	2.000	0.512	0.240
“Becoming an entrepreneur is an important part of who I am”	EII3	3.029	1.338	3.000	-0.096	0.240
“When I think about it, the term ‘entrepreneur’ would fit me pretty well”	EII4	2.828	1.585	3.000	0.108	0.240
“I am always thinking about becoming an entrepreneur”	EII5	2.864	1.491	3.000	0.587	0.240
“It is important for me to express my entrepreneurial aspirations.”	EII6	2.981	1.125	3.000	-0.147	0.240

Entrepreneurial Identity-venture antecedents		2.816	1.406			
I have good access to social networks of other entrepreneurs in my local area.	EIV1	2.867	1.388	3.000	-0.028	0.240
There is a lot of industry knowledge available in my local environment.	EIV2	2.409	1.313	2.000	0.428	0.240
I have good access to advice and mentoring from experienced local entrepreneurs.	EIV3	2.84	1.504	3.000	0.076	0.240
I would have good access to financing for a potential new business venture in my local area.	EIV4	3.143	1.459	3.000	-0.236	0.240
There are many small businesses prevalent in my local community.	EIV5	2.821	1.366	3.000	0.057	0.240
Entrepreneurial Identity-Socio-cultural antecedents		3.014	1.449			
Entrepreneurship is respected as a career choice in my society.	EIS1	3.097	1.472	3.000	-0.136	0.240
Business failures are tolerated and not stigmatized in my community.	EIS2	3.119	1.422	3.000	-0.109	0.240
There are role models and success stories of local entrepreneurs.	EIS3	2.961	1.497	3.000	-0.021	0.240
Support programs make entrepreneurship accessible to varied demographics.	EIS4	2.751	1.468	3.000	0.128	0.240
Entrepreneurship outcomes can provide positive social outcomes.	EIS5	3.143	1.385	3.000	-0.291	0.240

Source: (Author 2024)

5.7 Exploratory Factor Analysis

Factor analytic procedures encompass a range of statistical methods used to explore the relationships among observed variables within a dataset. These variables are typically measured through questions or items in surveys or assessments. Factor analysis is not a single statistical method but rather a collection of analyses that share similar methodology and purpose. The various theoretical and mathematical variations in factor analysis allow for its application in diverse research fields and contexts. Factor analysis provides researchers with a powerful tool to uncover underlying dimensions or latent factors that explain the patterns of correlations among observed variables. By identifying these latent factors, researchers can gain insights into the underlying constructs or concepts being measured. This, in turn, aids in data reduction, identifying commonalities among variables, and understanding complex relationships. The flexibility of factor analytic procedures has contributed to their widespread use across disciplines and applications. In social sciences, factor analysis has been employed in fields such as psychology, sociology, and education to explore psychological constructs, social attitudes, and educational measurement. It has also found applications in market research, where it helps identify consumer preferences and market segments. Additionally, factor analysis is utilized in the natural and physical sciences to understand complex systems and extract meaningful information from large datasets. However, the versatility of factor analysis has also led to ongoing debates regarding its appropriate applications. Researchers must carefully consider various factors, such as the suitability of the dataset, the underlying assumptions of factor analysis, and the specific research questions or hypotheses being investigated. Additionally, decisions regarding the number of factors to retain, the rotation method used, and the interpretation of factor loadings require careful consideration (Beavers *et al.*, 2013).

5.7.1 Kaiser-Meyer-Olkin Test of Sampling Adequacy

The Kaiser-Meyer-Olkin Test of Sampling Adequacy (KMO) is a measure of the shared variance in the items (Hill, 2011). The KMO measure assesses the suitability of the dataset for factor analysis. It evaluates the extent to which the observed variables in the dataset are related and appropriate for extracting meaningful factors. The KMO measure ranges from 0 to 1, with values closer to 1 indicating better sampling adequacy. As reported in Table 5.6, the KMO measure is 0.894, which indicates a high degree of sampling adequacy. This suggests that the dataset is suitable for factor analysis (Shkeer and Awang, 2019). Furthermore, Bartlett's test examines the null hypothesis that the correlation matrix of the observed variables is an identity matrix, meaning that there are no underlying factors. A significant result indicates that there is sufficient correlation among the variables to proceed with factor analysis. The test statistic for Bartlett's test is the approximate chi-square value, which is 16561.362 in this case. The degrees of freedom (df) indicate the number of variables used in the analysis. The p-value (Sig.) associated with the test is 0.000, indicating that the result is highly significant. Therefore, the null hypothesis is rejected, suggesting that there is sufficient correlation among the variables to proceed with factor analysis.

Table 5.6 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.894
Bartlett's Test of Sphericity	Approx. Chi-Square	16561.362
	df	2415
	Sig.	0.000

Source: (Author, 024)

5.8 Diagnostic Test

5.8.1 Collinearity Statistics

The study sought to find out the collinearity among the independent variables using tolerance and variation inflation factor (VIF) statistics of the predictor constructs. Variance inflation

factor (VIF) was assessed to indicate the presence of Multicollinearity (Cole and Preacher, 2014). Multicollinearity among the Independent (Predictor) variables is a concern when using multiple regression analysis model. Hair *et al.* (2010) recommended assessing multicollinearity by reviewing correlation matrix for the Independent Variables further by computing tolerance and variance inflation factor (VIF) values. The acceptable level of tolerance in collinearity statistics is 0.9 (Hair *et al.*, 2010). The findings as shown in Table 5.7 revealed that the tolerance values are below 1, indicating some level of collinearity among the independent variables. However, the values are not extremely low, suggesting that the collinearity is not severe. Similarly, all the VIF values are below 5, which is generally considered an acceptable threshold for collinearity. This suggests that while there is some collinearity present, it is not excessive enough to cause major issues in the regression analysis.

Table 5.7: Collinearity Statistics

Collinearity Statistics		
Variables	Tolerance	VIF
ACF	0.577	1.733
EDU	0.470	2.127
INF	0.522	1.915
NET	0.359	2.785
REG	0.620	1.612
CUL	0.434	2.305
INN	0.408	2.450

a. Dependent Variable: MKT

5.9 Confirmatory Factor Analysis / Measurement Model

5.9.1 Reliability and Validity of final measurement model

The findings presented in the Table 5.8 show the factor loadings, composite reliability, and average variance extracted (AVE) for each factor in the research study after dropping the poor

factor loadings. The poor factor loadings were dropped after several iterations. The poor factor loadings (ACF1, ACF2, ACF3, ACF4, ACF5, ACF6, ACF7; CUL 3, 4, 5, EDU 1, 2, 3, 4, 5, EII 3, 4, 5, 6, EIS 1, 4, 5, 6, INF 1, 2, 3, 4, INN 1, 6, 7; MAR 1, 3, 4; NET 2, 5, 6; OPE 4, 5, 6, 7; REG 1, 2, 7) dropped helped improved the reliability and validity of the study findings. Invariably, all the factors measuring Access to finance were all poorly loaded hence the variable was totally dropped from the study.

These statistics provide important insights into the measurement properties and reliability of the constructs under investigation. The factor loadings indicate the strength of the relationship between each observed variable and its underlying construct (Shrestha, 2021). The factor loadings for individual items within each construct are above 0.7, which is considered a good benchmark (Hair et al., 2014). For example, the factor loadings for the culture (CUL) items range from 0.799 to 0.838, indicating that these items are strongly associated with the CUL construct and are good representatives of it (Tabachnick & Fidell, 2013). Similarly, the education (EDU) construct has high factor loadings of 0.95 and 0.909 for its items, suggesting a strong association between the items and the construct. The AVE values for each construct are greater than the squared correlations between the construct and other constructs, providing evidence of discriminant validity (Fornell & Larcker, 1981). This indicates that the constructs are distinct from each other.

Composite reliability (ρ_A) measures the internal consistency or reliability of the measurement model. It indicates the extent to which the observed variables within each factor consistently measure the underlying construct (Dolintina and Pang, 2022). In this study, all factors demonstrate high composite reliability values, ranging from 0.746 to 0.910. This suggests that the observed variables within each factor reliably measure their respective constructs.

The results further demonstrate the reliability and validity of the constructs used in the study. For instance, the culture (CUL) construct has a Cronbach's alpha (CA) value of 0.842, indicating good internal consistency reliability. The composite reliability for CUL is 0.894, further confirming its reliability (Hair et al., 2014). The average variance extracted (AVE) value for CUL is 0.679, exceeding the minimum threshold of 0.5 (Fornell & Larcker, 1981), demonstrating convergent validity. Similar patterns of high reliability and validity can be observed for other constructs such as education (EDU) with CA = 0.846, AVE = 0.865, and EII with CA = 0.767, AVE = 0.811.

In essence, the findings suggest that the measurement model used in the study demonstrates good reliability and validity. The observed variables within each factor exhibit strong relationships with their respective constructs, indicating that the chosen variables effectively measure the intended constructs. These findings provide confidence in the accuracy and robustness of the measurement model in capturing the underlying factors being studied.

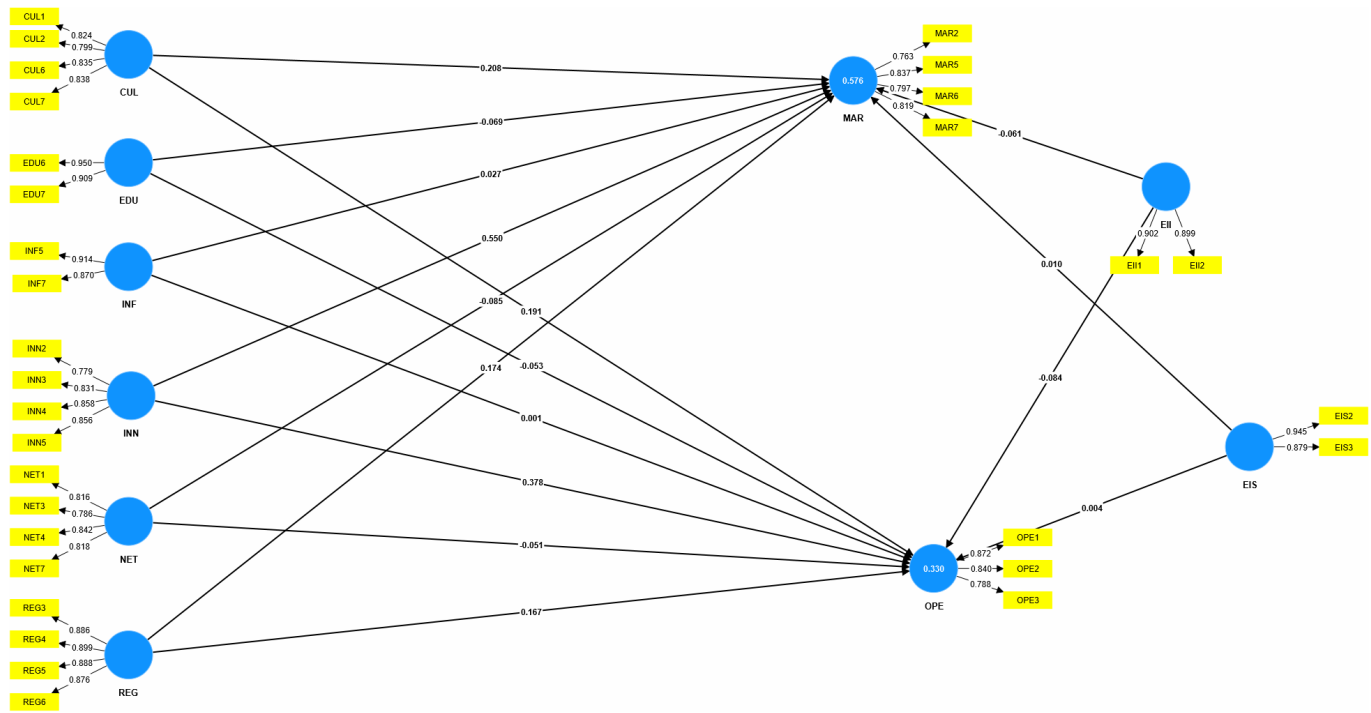
Table 5.8: Reliability and Validity of final measurement model

Code	Factor Loadings	CA	rho_A	Composite Reliability	AVE
CUL		0.842	0.843	0.894	0.679
CUL1	0.824				
CUL2	0.799				
CUL6	0.835				
CUL7	0.838				
EDU		0.846	0.898	0.927	0.865
EDU6	0.95				
EDU7	0.909				
EII		0.767	0.767	0.896	0.811
EII1	0.902				
EII2	0.899				
EIS		0.807	0.889	0.909	0.833
EIS2	0.945				
EIS3	0.879				

INF		0.746	0.765	0.886	0.796
INF5	0.914				
INF7	0.87				
INN		0.851	0.859	0.9	0.692
INN2	0.779				
INN3	0.831				
INN4	0.858				
INN5	0.856				
MAR		0.820	0.828	0.88	0.647
2-Mar	0.763				
5-Mar	0.837				
6-Mar	0.797				
7-Mar	0.819				
NET		0.842	0.898	0.888	0.666
NET1	0.816				
NET3	0.786				
NET4	0.842				
NET7	0.818				
OPE		0.781	0.791	0.873	0.696
OPE1	0.872				
OPE2	0.84				
OPE3	0.788				
REG		0.910	0.916	0.937	0.788
REG3	0.886				
REG4	0.899				
REG5	0.888				
REG6	0.876				

Source: (Author, 2024)

Figure 5.1: Final measurement model



Source: (Author, 2024).

5.9.2 Discriminant Validity HTMT

The assessment of discriminant validity is of particular importance for the empirical study of relationships between theoretical concepts (Bagozzi and Phillips, 1982; Henseler, Hubona and Ray, 2016; Voorhees *et al.*, 2016; Hair *et al.*, 2017; Franke and Sarstedt, 2019; Hubona, Schubert and Henseler, 2021; Rönkkö and Cho, 2022). For the operationalization of these theoretical concepts, it is vital that the employed measurement models actually measure what they are supposed to measure (Campbell and Fiske, 1959), thus establishing construct validity (Peter & Churchill Jr, 1986). Construct validity comprises different forms, including discriminant validity (Netemeyer, Bearden and Sharma, 2003). Discriminant validity in turn is defined as “the degree to which two measures designed to measure similar, but conceptually different, constructs are related. A low to moderate correlation is often considered evidence of discriminant validity” (Netemeyer, Bearden and Sharma, 2003). The

methodological literature provides different approaches to assess discriminant validity. Among others, the constrained phi approach (Jöreskog, 1971), the Fornell–Larcker criterion (Fornell and Larcker, 1981) and the comparison of cross-loadings Chin (1998) have been suggested to assess discriminant validity. Dijkstra and Henseler (2015) suggested the heterotrait–monotrait ratio of correlations (HTMT) to assess discriminant validity. Due to its good performance and straightforward application, the HTMT has found widespread application and dissemination, making Dijkstra and Henseler (2015) one of the most frequently cited papers in business research. Although the HTMT was originally proposed for models estimated by partial least squares path modeling Wold and Bertholet (1982), it also finds its application in structural equation modeling (Voorhees *et al.*, 2016). A HTMT value of 0.85 and below is considered a good discriminant validity of a study (Henseler, Ringle and Sarstedt, 2016). The results presented in Table 5.9 shows that the study has a good discriminant validity based on the previous literature presented above. The HTMT values show majority of the HTMT values are below the recommended threshold of 0.85 or 0.90 (Kline, 2015), indicating that the constructs are sufficiently distinct from each other. For example, the HTMT value between Culture (CUL) and Innovation (INN) is 0.694, is well below the threshold. Similarly, the HTMT value between MAR and OPE is 0.737,

However, there are some instances where the HTMT values are relatively high, indicating potential overlap between certain constructs. For instance, the HTMT value between Culture (CUL) and Market performance (MAR) is 0.732, and the value between Infrastructure (INF) and Regulations (REG) is 0.736. Although these values are below the threshold, they suggest that there may be some conceptual similarity between these pairs of constructs.

Table 5.9: HTMT

Variables

	CUL	EDU	EII	EIS	INF	INN	MAR	NET	OPE	REG
CUL										
EDU	0.114									
EII	0.097	0.293								
EIS	0.231	0.08	0.189							
INF	0.029	0.418	0.113	0.041						
INN	0.694	0.139	0.048	0.27	0.047					
MAR	0.732	0.193	0.153	0.2	0.123	0.734				
NET	0.121	0.728	0.243	0.088	0.713	0.159	0.17			
OPE	0.585	0.148	0.169	0.168	0.078	0.641	0.737	0.125		
REG	0.104	0.305	0.135	0.037	0.736	0.063	0.155	0.452	0.117	

Source: (Author, 2024)

5.9.3 Model fit indices

The model fit indices of the study are reported in Table 5.10 below. The table presents the values of the Standardized Root Mean Square Residual (SRMR), the squared Euclidean distance (d_ULS), the geodesic distance (d_G), the Chi-square statistic, and the Normed Fit Index (NFI) for both the saturated and estimated models. SRMR is a measure of the average discrepancy between the observed and predicted correlations, with values less than 0.08 indicating a good fit (Hu & Bentler, 1999). In this study, the SRMR values are 0.06 for the saturated model and 0.069 for the estimated model, suggesting an acceptable fit. The slightly higher value for the estimated model indicates that there may be some room for improvement in the model's fit to the data. The d_ULS and d_G values are also measures of model fit, with lower values indicating better fit. In this case, the d_ULS and d_G values are higher for the estimated model compared to the saturated model, suggesting that the estimated model may not fit the data as well as the saturated model. However, it is important to note that the saturated model represents a perfect fit to the data, and it is not always realistic or desirable to achieve a perfect fit in practice (Byrne, 2013). The Chi-square statistic assesses the overall fit

of the model, with lower values indicating better fit (Mueller and Hancock, 2018; Shi and Maydeu-Olivares, 2020). However, the Chi-square statistic is sensitive to sample size and may be significant even for well-fitting models in large samples ((Hooper, Coughlan and Mullen, 2008; Kline, 2023). In this study, the Chi-square values are relatively high for both the saturated and estimated models, indicating some discrepancy between the observed and predicted covariance matrices. The NFI is an incremental fit index that compares the proposed model to a null model, with values closer to 1 indicating a better fit. The NFI values for the saturated and estimated models are 0.749 and 0.73, respectively. These values suggest that the proposed model represents a substantial improvement over the null model, but there is still some room for improvement in the model's fit (Bentler & Bonett, 1980).

Table 5.10 Model fit indices

	Saturated model	Estimated model
SRMR	0.06	0.069
d_ ULS	1.791	2.351
d_ G	0.767	0.862
Chi-square	1897.255	2044.845
NFI	0.749	0.73

Source: (Author, 2024)

5.9 Bivariate Correlation Analysis between study variables

Scientific research extends beyond the mere description and analysis of individual phenomena in isolation through univariate analysis. While univariate analysis plays a crucial role in statistical analysis, aiding in error detection, data familiarization, aggregation, and basic information gathering on simple phenomena, its cognitive impact is limited. Consequently, research primarily focuses on examining the relationships between different phenomena. Bivariate analysis, in particular, explores how the dependent variable (also

known as the outcome variable) is influenced or explained by the independent variable (also known as the explanatory variable) in an asymmetrical analysis. Alternatively, bivariate analysis investigates the association between two variables without implying a cause-and-effect relationship in a symmetrical analysis (Bertani *et al.*, 2018).

From the results in Table 5.8, there is a significant positive correlation between ACF and MKT, with a correlation coefficient of 0.446. This finding suggests a moderate positive relationship between ACF and MKT. This implies that as ACF increases, MKT also tends to increase, indicating a potential connection between accounting and finance knowledge and marketing activities. Furthermore, a significant positive correlation was observed between EDU and MKT, with a correlation coefficient of 0.519. This implies a moderate positive relationship between education and marketing. Individuals with higher levels of education may possess a broader skill set and knowledge base that can be beneficial in marketing activities. Another noteworthy correlation is between INF and MKT, with a correlation coefficient of 0.390. This finding suggests a moderate positive relationship between information technology and marketing. It indicates that the utilization of information technology in marketing strategies may have a positive impact on overall marketing performance.

Additionally, a significant positive correlation was found between NET and MKT, with a correlation coefficient of 0.492. This implies a moderate positive relationship between networking capabilities and marketing. Building and maintaining a strong network may contribute to effective marketing practices and outcomes.

Moreover, a significant positive correlation was observed between REG and MKT, with a correlation coefficient of 0.288. This suggests a moderate positive relationship between regulations and marketing. Compliance with regulations and an understanding of the legal

landscape can influence marketing strategies and their efficacy. Furthermore, correlations between other factors and MKT were also identified. These include CUL with a correlation coefficient of 0.288, INN with a correlation coefficient of 0.167, OPE with a correlation coefficient of 0.075, EII with a correlation coefficient of 0.094, EIV with a correlation coefficient of 0.158, and EIS with a correlation coefficient of 0.148. These correlations indicate varying degrees of positive relationships between these factors and marketing.

Table 5.11: Bivariate Correlation analysis

SN	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1	Age																							
2	Education	-.108*																						
3	Marital	0.005	.293**																					
4	Dependents	.296**	0.038	-0.007																				
5	Sector	-.151**	.367**	.124*	0.003																			
6	size	.177**	.255**	.174**	-0.057	.141**																		
7	Experience	.199**	-.491**	-.215**	.181**	-.245**	-.311**																	
8	prior work	-.100*	-.181**	-.107*	0.034	-.131**	-.228**	.321**																
9	Motivation	.318**	-.479**	-.190**	.149**	-.238**	-.204**	.595**	.177**															
10	growth intention	.105*	0.042	0.022	.179**	0.054	-0.01	0.028	0.069	0.007														
11	ACF	0.022	.446**	.764**	0.045	.123*	.204**	-.301**	-.175**	-.269**	0.03													
12	EDU	-0.01	.519**	.334**	-0.002	0.081	.273**	-.334**	-.178**	-.301**	0.019	.549**												
13	INF	-0.011	.390**	.267**	0.044	0.073	.135**	-.311**	0.05	-.238**	-0.01	.462**	.572**											
14	NET	-0.033	.492**	.394**	0.001	.193**	.284**	-.337**	-.127**	-.269**	-0.02	.612**	.685**	.618**										
15	REG	0.013	.288**	.217**	0.074	-0.02	0.045	-0.038	0.088	0.006	0.027	.412**	.431**	.524**	.555**									
16	CUL	.137**	0.084	-0.061	0.086	0	.138**	-.156**	-.256**	-0.093	.107*	-0.065	-0.004	-0.02	-0.075	0.027								
17	INN	.167**	0.084	-.134**	.142**	-0.02	0.069	-0.086	-.173**	-0.043	0.072	-.122*	0.005	0.048	-.122*	0.075	.746**							
18	MKT	.105*	0.075	-.108*	.123*	0.002	0.069	-0.093	-.142**	-0.018	0.088	-.141**	-0.015	0.044	-.120*	0.084	.689**	.782**						
19	OPE	0.075	0.081	-.101*	.139**	0	0.028	-0.032	-0.038	-0.026	.157**	-0.08	-0.027	0.068	-.100*	.112*	.517**	.559**	.711**					
20	EII	0.035	0.094	.234**	0.009	.128**	0.05	-0.036	-0.035	-0.028	-0.01	.332**	.140**	.128**	.182**	0.049	-0.055	-0.055	-.102*	-0.096				
21	EIV	.188**	-0.004	.158**	0.094	0.053	0.077	-0.01	0.021	0.064	0.01	.141**	0.078	.154**	.119*	.119*	.119*	.111*	0.087	0.063	.515**			
22	EIS	-0.02	0.068	.148**	-0.004	0.035	0.012	-0.018	0.077	0.04	-0.06	.167**	0.087	.107*	.141**	.112*	-0.066	-0.058	-0.06	-0.032	.469**	.409**		

5.10 Analysis of Hypothesized relationship

5.10.1 Access to Finance and Women's Entrepreneurial Performance in Ghana's

Entrepreneurial Ecosystem

The study assessed the impact of access to finance of women entrepreneurial performance in Ghana's entrepreneurial ecosystem. The results of the study indicated that access to finance has no significant effect on the market performance of women entrepreneurs ($\beta = 0.115$, $SD = 1.048$, $t = 0.23$, $p = 0.818$) hence the stated hypothesis *H1a1* was not supported. Furthermore, the relationship between access to finance and the operational performance of women entrepreneurs was not statistically significant ($\beta = 0.163$, $SD = 0.868$, $t = 0.427$, $p = 0.669$) hence the hypothesis *H1a2* was also not supported. The non-significant relationship between access to finance and entrepreneurial performance has several implications for a better understanding of how the entrepreneurial ecosystem of Ghana influence the entrepreneurial performance of women in relations to their assess to funding and finance. The findings suggest that factors other than access to finance may have a more substantial influence on the entrepreneurial performance of women in Ghana. Researchers and policymakers should explore alternative factors such as social networks, cultural norms, institutional support, and market conditions to gain a comprehensive understanding of the determinants of women's entrepreneurial outcomes. By recognizing and addressing these alternative factors, interventions and support mechanisms can be tailored more effectively to enhance women's entrepreneurial success. Furthermore, the insignificance of the relationship between access to finance and performance highlights the importance of considering the specific contextual dynamics within Ghana's entrepreneurial ecosystem. Economic, cultural, and institutional factors unique to Ghana may interact with access to finance in complex ways, influencing women's entrepreneurial outcomes. It is crucial for policymakers and stakeholders to take

these contextual dynamics into account when designing strategies to support women entrepreneurs in Ghana.

5.10.2 Education and Training and women entrepreneurial performance

The study assessed the impact of education and training on the entrepreneurial performance of Ghanaian women entrepreneurs. The impact of education (EDU) on market performance (MAR) is negative ($\beta = -0.072$) and statistically insignificant ($p = 0.110$) at the 5% level. The t-statistic (1.597) is also below the critical value of 1.96. Therefore, hypothesis H1b1 is not supported. The impact of education (EDU) on operational performance (OPE) is negative ($\beta = -0.059$) and statistically insignificant ($p = 0.262$) at the 5% level. The t-statistic (1.121) is also below the critical value of 1.96. Therefore, hypothesis H1b2 is not supported.

The negative and statistically insignificant effects of education on both market performance and operational performance challenge the conventional wisdom that higher levels of education always lead to better entrepreneurial outcomes. These results suggest that the current education and training programs in Ghana may not be adequately preparing women for the challenges and demands of entrepreneurship. The content and delivery of these programs may not be aligned with the practical needs and realities faced by women entrepreneurs in the Ghanaian context. This misalignment could explain why higher levels of education do not necessarily translate into improved market or operational performance for women entrepreneurs.

Moreover, the insignificance of the relationships between education and entrepreneurial performance highlights the complexity of the factors influencing women's entrepreneurial success in Ghana. While education is undoubtedly important, it is not the sole determinant of entrepreneurial performance. Other factors, such as access to resources, networks, mentorship, sociocultural norms, and institutional support, may play a more critical role in

shaping women's entrepreneurial outcomes. The study's findings call for a reevaluation of the current approach to entrepreneurial education and training for women in Ghana. Policymakers, educators, and support organizations should consider developing more comprehensive and context-specific programs that address the diverse needs and challenges faced by women entrepreneurs. These programs should go beyond traditional classroom-based learning and incorporate practical skills training, mentorship, networking opportunities, and access to resources.

Furthermore, the study highlights the need for a holistic approach to supporting women's entrepreneurship in Ghana. In addition to education and training, efforts should be directed towards creating an enabling environment that promotes gender equality, reduces sociocultural barriers, and provides institutional support for women entrepreneurs. This may involve initiatives such as improving access to finance, establishing supportive legal frameworks, and challenging gender stereotypes that limit women's entrepreneurial aspirations.

5.10.3 Infrastructure and resources and Ghanaian women entrepreneurial performance

The study investigated the influence of infrastructure and resources on the performance of women entrepreneurs in Ghana, focusing on both market performance (MAR) and operational performance (OPE). The results suggest that infrastructure (INF) has a positive but statistically insignificant impact on both market performance ($\beta = 0.034$, $p = 0.493$) and operational performance ($\beta = 0.007$, $p = 0.902$) at the 5% significance level. The t-statistics for both relationships (0.685 for H1c1 and 0.123 for H1c2) are below the critical value of 1.96, indicating that the hypotheses H1c1 and H1c2 are not supported. These findings have several implications for understanding the role of infrastructure and resources in the entrepreneurial performance of women in Ghana. The positive coefficients suggest that the availability of infrastructure and resources may have a favorable influence on both market

and operational performance, albeit not statistically significant. This implies that while better infrastructure and resources can potentially enhance women's entrepreneurial performance, their impact may be limited or overshadowed by other factors.

The lack of statistical significance indicates that the availability of infrastructure and resources alone may not be a strong predictor of entrepreneurial success for women in Ghana. This finding challenges the assumption that providing infrastructure and resources is sufficient to promote women's entrepreneurship. It suggests that other factors, such as access to markets, networks, skills, and sociocultural norms, may play a more crucial role in determining women's entrepreneurial performance.

The study's results highlight the need for a more comprehensive approach to supporting women's entrepreneurship in Ghana. While investing in infrastructure and resources is important, it should be complemented by other interventions that address the multifaceted challenges faced by women entrepreneurs. These interventions may include improving access to finance, providing targeted training and mentorship programs, fostering networks and market linkages, and promoting gender-inclusive policies and practices. The insignificance of the relationships between infrastructure and entrepreneurial performance may also reflect the heterogeneity of women entrepreneurs in Ghana. The impact of infrastructure and resources on performance may vary depending on factors such as the sector, location, scale, and growth orientation of the business. Therefore, support initiatives should be tailored to the specific needs and contexts of different segments of women entrepreneurs. The study's findings underscore the importance of conducting further research to better understand the complex dynamics influencing women's entrepreneurial performance in Ghana. Future studies could explore the interplay between infrastructure, resources, and other factors such as human capital, social capital, and institutional support. Additionally, qualitative research could provide deeper insights into the lived experiences and perspectives of women entrepreneurs,

shedding light on the challenges they face and the strategies they employ to navigate the entrepreneurial landscape.

5.10.4 Network and Social Capital and women entrepreneurial Performance

The study investigated the impact of networks and social capital on the entrepreneurial performance of women in Ghana, examining both market performance (MAR) and operational performance (OPE). The results indicate that networks (NET) have a negative but statistically insignificant effect on both market performance ($\beta = -0.083$, $p = 0.110$) and operational performance ($\beta = -0.051$, $p = 0.428$) at the 5% significance level. The t-statistics for both relationships (1.599 for H1d1 and 0.792 for H1d2) are below the critical value of 1.96, suggesting that the hypotheses H1d1 and H1d2 are not supported.

These findings have several implications for understanding the role of networks and social capital in the entrepreneurial performance of women in Ghana. The negative coefficients, although not statistically significant, suggest that networks may not necessarily contribute positively to the market and operational performance of women entrepreneurs in Ghana. This finding challenges the conventional wisdom that networks and social capital always have a beneficial impact on entrepreneurial success.

The lack of statistical significance in the relationships between networks and entrepreneurial performance raises questions about the effectiveness and relevance of the current networks available to women entrepreneurs in Ghana. It is possible that the existing networks may not be providing the necessary resources, information, or support that women entrepreneurs need to enhance their performance. The quality and composition of the networks, rather than mere access to networks, may be more critical in determining their impact on entrepreneurial

outcomes. Moreover, the insignificance of the relationships suggests that other factors beyond networks may have a more substantial influence on the entrepreneurial performance of women in Ghana. These factors could include individual characteristics, such as education, skills, and motivation, as well as contextual factors, such as market conditions, competition, and institutional support. The study's findings highlight the need for a more comprehensive understanding of the complex interplay between networks, individual factors, and the broader entrepreneurial ecosystem in shaping women's entrepreneurial success.

The negative and insignificant impact of networks on entrepreneurial performance may also reflect the challenges and barriers that women entrepreneurs in Ghana face in accessing and leveraging networks effectively. Gender-related constraints, such as limited mobility, time poverty, and social norms, may hinder women's ability to build and maintain strong networks that can support their entrepreneurial endeavors. Additionally, the lack of diversity and inclusivity in existing networks may limit the benefits that women entrepreneurs can derive from them. The study's findings underscore the importance of developing targeted interventions and support mechanisms that go beyond simply promoting network formation and focus on enhancing the quality and effectiveness of networks for women entrepreneurs in Ghana. This may involve initiatives such as mentoring programs, targeted networking events, and platforms that facilitate meaningful connections and resource exchange among women entrepreneurs. Furthermore, efforts should be made to address the gender-specific barriers that women face in accessing and leveraging networks, such as providing childcare support, promoting gender-inclusive networking spaces, and challenging social norms that limit women's participation in networks.

5.10.5 Regulatory Environment and women entrepreneurial performance

The study investigated the impact of regulations on the entrepreneurial performance of women in Ghana, examining both market performance (MAR) and operational performance (OPE). The results indicate that regulations (REG) have a positive and statistically significant effect on both market performance ($\beta = 0.171$, $p = 0.000$) and operational performance ($\beta = 0.151$, $p = 0.011$) at the 5% significance level. The t-statistics for both relationships (3.544 for H1e1 and 2.545 for H1e2) are above the critical value of 1.96, suggesting that the hypotheses H1e1 and H1e2 are supported. These findings have several important implications for understanding the role of regulations in shaping the entrepreneurial performance of women in Ghana. The positive and significant coefficients suggest that regulations play a crucial role in facilitating the market and operational success of women entrepreneurs. This finding aligns with the notion that a supportive regulatory environment can create an enabling ecosystem for entrepreneurship, particularly for women who may face additional challenges and barriers. The significance of the relationship between regulations and market performance (H1e1) indicates that women entrepreneurs in Ghana benefit from a regulatory framework that supports their access to markets, customers, and resources. Regulations that promote fair competition, reduce entry barriers, and protect intellectual property rights can enhance women's ability to compete and succeed in the marketplace. Additionally, regulations that facilitate access to finance, such as credit guarantees or targeted lending programs, can help women entrepreneurs overcome the financial constraints they often face. The significance of the relationship between regulations and operational performance (H1e2) suggests that a supportive regulatory environment can also enhance the efficiency and effectiveness of women-owned businesses in Ghana. Regulations that streamline business registration processes, simplify tax compliance, and reduce bureaucratic burdens can help women entrepreneurs focus on their core business operations and improve their productivity. Furthermore, regulations that promote gender equality and address discriminatory practices

can create a level playing field for women entrepreneurs and enable them to operate their businesses more effectively.

The study's findings highlight the critical role that policymakers and regulatory authorities play in creating an enabling environment for women's entrepreneurship in Ghana. By implementing regulations that support women entrepreneurs, such as those that promote access to markets, finance, and resources, policymakers can help unlock the economic potential of women-owned businesses and contribute to inclusive economic growth. However, it is important to note that the impact of regulations on entrepreneurial performance may vary depending on the specific context and the implementation of those regulations. Policymakers should engage with women entrepreneurs and other stakeholders to ensure that regulations are designed and implemented in a way that addresses the unique challenges and needs of women-owned businesses. Additionally, efforts should be made to raise awareness about the existing regulations and support mechanisms available to women entrepreneurs, as lack of information can limit their ability to benefit from these policies. The study's findings also underscore the importance of considering the interplay between regulations and other factors that influence women's entrepreneurial performance, such as education, networks, and sociocultural norms. A holistic approach that addresses multiple dimensions of the entrepreneurial ecosystem is necessary to create an enabling environment for women entrepreneurs in Ghana.

5.10.6 Cultural and Social Factors and women entrepreneurial performance

The study examined the influence of cultural and social factors within the Ghanaian ecosystem on the entrepreneurial performance of women, focusing on both market performance (MAR) and operational performance (OPE). The results reveal that culture

(CUL) has a positive and statistically significant impact on both market performance ($\beta = 0.208$, $p = 0.000$) and operational performance ($\beta = 0.206$, $p = 0.003$) at the 1% significance level. The t-statistics for both relationships (3.927 for H1f1 and 3.012 for H1f2) are above the critical value of 2.58, indicating that the hypotheses H1f1 and H1f2 are supported.

These findings have important implications for understanding the role of cultural and social factors in shaping the entrepreneurial performance of women in Ghana. The positive and significant coefficients suggest that the cultural context in Ghana plays a crucial role in facilitating the market and operational success of women entrepreneurs. This finding aligns with the growing recognition that cultural factors, such as social norms, values, and beliefs, can significantly influence entrepreneurial behavior and outcomes.

The significance of the relationship between culture and market performance (H1f1) suggests that certain aspects of Ghanaian culture may be conducive to women entrepreneurs' success in the marketplace. For example, cultural values that emphasize community support, collaboration, and mutual assistance may help women entrepreneurs access resources, information, and networks that are essential for market success. Additionally, cultural norms that value entrepreneurship and celebrate successful women entrepreneurs may create a supportive environment that encourages women to pursue entrepreneurial activities and strive for market excellence.

The significance of the relationship between culture and operational performance (H1f2) indicates that cultural factors also play a role in enhancing the efficiency and effectiveness of women-owned businesses in Ghana. Cultural values that emphasize hard work, perseverance, and innovation may encourage women entrepreneurs to adopt best practices and continuously improve their business operations. Furthermore, cultural norms that promote gender equality

and challenge traditional gender roles may enable women entrepreneurs to operate their businesses more effectively and overcome gender-related barriers.

The study's findings highlight the importance of considering cultural and social factors when designing policies and interventions aimed at supporting women's entrepreneurship in Ghana. Policymakers and support organizations should recognize the potential of leveraging cultural assets and addressing cultural barriers to create an enabling environment for women entrepreneurs. This may involve initiatives that celebrate successful women entrepreneurs, challenge gender stereotypes, and promote positive cultural values that support entrepreneurship.

However, it is important to note that culture is not a monolithic concept, and the impact of cultural factors on entrepreneurial performance may vary across different regions, ethnic groups, and socioeconomic contexts within Ghana. Policymakers and researchers should engage with local communities and stakeholders to gain a nuanced understanding of the specific cultural dynamics that shape women's entrepreneurial experiences in different contexts.

The study's findings also underscore the need for a holistic approach to supporting women's entrepreneurship that takes into account the interplay between cultural factors and other dimensions of the entrepreneurial ecosystem, such as education, networks, and regulations. By addressing the cultural, social, and institutional barriers that women entrepreneurs face, while also leveraging cultural assets and promoting positive cultural change, Ghana can create a more inclusive and supportive environment for women's entrepreneurship.

5.10.7 Innovation and knowledge spillover and women entrepreneurial performance

The study investigated the impact of innovation and knowledge spillover on the entrepreneurial performance of women in Ghana, examining both market performance (MAR) and operational performance (OPE). The results indicate that innovation (INN) has a positive and statistically significant effect on both market performance ($\beta = 0.541$, $p = 0.000$) and operational performance ($\beta = 0.361$, $p = 0.000$) at the 1% significance level. The t-statistics for both relationships (11.207 for H1g1 and 5.175 for H1g2) are well above the critical value of 2.58, suggesting that the hypotheses H1g1 and H1g2 are strongly supported. These findings have several important implications for understanding the role of innovation and knowledge spillover in driving the entrepreneurial success of women in Ghana. The positive and highly significant coefficients indicate that innovation is a critical factor in enhancing both the market and operational performance of women-owned businesses. This aligns with the growing recognition that innovation is a key driver of competitiveness, growth, and success in today's dynamic business environment. The strong support for hypothesis H1g1 suggests that women entrepreneurs who engage in innovative activities, such as developing new products, services, or processes, are more likely to achieve superior market performance. Innovation allows women-owned businesses to differentiate themselves from competitors, meet evolving customer needs, and capture new market opportunities. By introducing innovative offerings, women entrepreneurs can gain a competitive edge, attract customers, and increase their market share and profitability.

The support for hypothesis H1g2 indicates that innovation also plays a crucial role in enhancing the operational efficiency and effectiveness of women-owned businesses in Ghana. Innovative practices, such as adopting new technologies, streamlining processes, and implementing best practices, can help women entrepreneurs optimize their operations, reduce costs, and improve productivity. By embracing innovation, women-owned businesses can achieve operational excellence and enhance their overall performance. The study's findings

highlight the importance of fostering a culture of innovation and knowledge sharing within the entrepreneurial ecosystem in Ghana. Policymakers, support organizations, and educational institutions should prioritize initiatives that promote innovation and facilitate knowledge spillover among women entrepreneurs. This may involve providing access to research and development resources, organizing innovation workshops and training programs, and creating platforms for women entrepreneurs to collaborate and share knowledge.

Furthermore, the results suggest that women entrepreneurs in Ghana should actively seek out opportunities to engage in innovative activities and leverage knowledge spillover to enhance their entrepreneurial performance. This may involve investing in research and development, participating in innovation networks and clusters, and collaborating with other entrepreneurs, researchers, and experts to access new knowledge and ideas. The study's findings also underscore the need for a supportive institutional environment that encourages and rewards innovation among women entrepreneurs in Ghana. Policymakers should implement policies and regulations that foster innovation, such as protecting intellectual property rights, providing tax incentives for research and development, and reducing bureaucratic barriers to innovation. Additionally, financial institutions should offer targeted funding and support programs that help women entrepreneurs access the capital and resources needed to pursue innovative ventures.

Table 5.12: Direct path analysis results

Hypothesis	Path	Original sample (O)	Standard deviation (STDEV)	Tstatistics ((O/STDEV))	P values
H1b1	EDU -> MAR	-0.072	0.045	1.597	0.11
H1b2	EDU -> OPE	-0.059	0.053	1.121	0.262
H1c1	INF -> MAR	0.034	0.049	0.685	0.493

H1c2	INF -> OPE	0.007	0.057	0.123	0.902
H1d1	NET -> MAR	-0.083	0.052	1.599	0.11
H1d2	NET -> OPE	-0.051	0.064	0.792	0.428
H1e1	REG -> MAR	0.171	0.048	3.544	0.000
H1e2	REG -> OPE	0.151	0.059	2.545	0.011
H1f1	CUL -> MAR	0.208	0.053	3.927	0.000
H1f2	CUL -> OPE	0.206	0.069	3.012	0.003
H1g1	INN -> MAR	0.541	0.048	11.207	0.000
H1g2	INN -> OPE	0.361	0.07	5.175	0.000

Source: (Author, 2024)

5.10.8 Demographic variables as control variables

The demographic variables, including age, number of dependents, education, experience, marital status, business sector, and business size, were used as control variables to account for their potential influence on the relationship between the main independent variables and entrepreneurial performance. The findings of the study reveal that none of the demographic control variables have a statistically significant impact on either market performance or operational performance at the 5% level. This suggests that the variations in entrepreneurial performance among women in Ghana cannot be attributed to these demographic factors alone.

Age is found to have a negative but insignificant effect on both market performance ($\beta = -0.043$, $p = 0.251$) and operational performance ($\beta = -0.063$, $p = 0.187$). This implies that the age of women entrepreneurs does not significantly influence their ability to achieve better market outcomes or operational efficiency. The number of dependents also shows a positive but insignificant impact on market performance ($\beta = 0.032$, $p = 0.365$) and operational performance ($\beta = 0.067$, $p = 0.118$), suggesting that family responsibilities do not significantly hinder or enhance women's entrepreneurial performance.

The level of education of women entrepreneurs has a positive but insignificant effect on market performance ($\beta = 0.020$, $p = 0.654$) and operational performance ($\beta = 0.062$, $p = 0.253$). This finding challenges the conventional belief that higher education necessarily leads to better entrepreneurial outcomes. Similarly, experience shows a positive but insignificant impact on market performance ($\beta = 0.010$, $p = 0.825$) and operational performance ($\beta = 0.046$, $p = 0.366$), indicating that the length of entrepreneurial experience does not significantly influence women's entrepreneurial success in Ghana.

Marital status has a negative but insignificant effect on market performance ($\beta = -0.069$, $p = 0.059$) and operational performance ($\beta = -0.061$, $p = 0.175$). This suggests that being married or single does not significantly impact women's entrepreneurial performance. The business sector in which women entrepreneurs operate also shows an insignificant effect on market performance ($\beta = -0.017$, $p = 0.639$) and operational performance ($\beta = 0.024$, $p = 0.590$), implying that the type of industry does not significantly influence entrepreneurial outcomes.

Furthermore, business size has a positive but insignificant effect on market performance ($\beta = 0.021$, $p = 0.569$) and a negative but insignificant effect on operational performance ($\beta = -0.038$, $p = 0.394$). This suggests that the scale of operations does not significantly impact women's entrepreneurial performance in Ghana.

The insignificance of demographic factors in predicting women's entrepreneurial performance highlights the need to look beyond individual characteristics and consider the broader institutional, social, and economic factors that shape women's entrepreneurial experiences in Ghana. Policymakers and support organizations should focus on creating an enabling environment that supports women entrepreneurs, regardless of their demographic backgrounds. Also, the findings challenge the stereotypical assumptions about the capabilities and limitations of women entrepreneurs based on their age, education, marital status, or

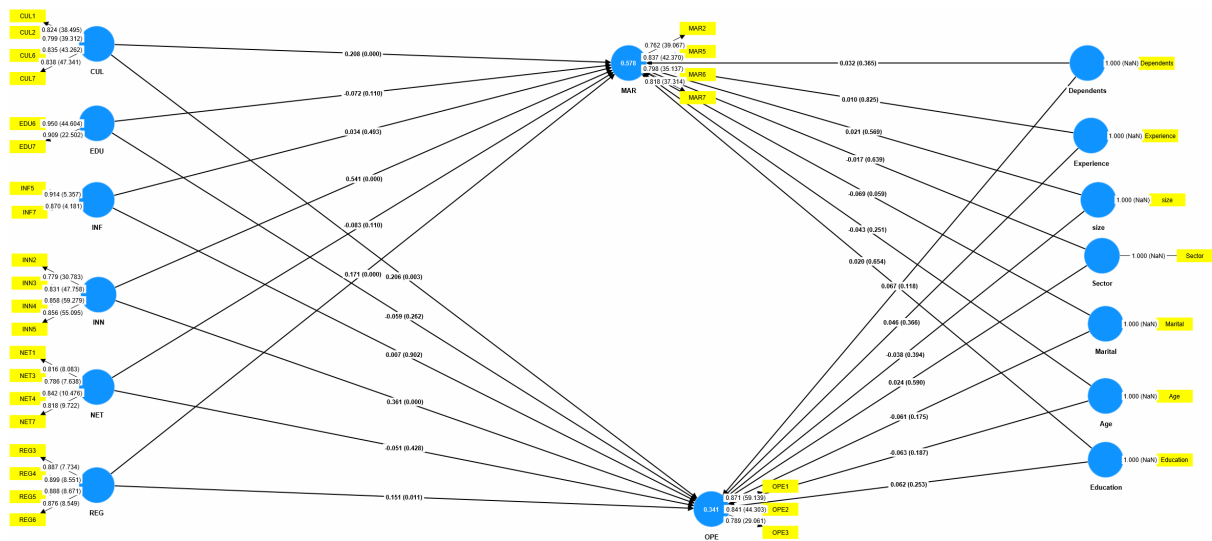
family responsibilities. Women entrepreneurs should be provided with equal opportunities and support, irrespective of their demographic profiles. This calls for a shift in societal attitudes and the elimination of gender-based barriers that hinder women's entrepreneurial pursuits. Furthermore, the study emphasizes the importance of considering other factors, such as access to resources, networks, markets, and institutional support, in understanding women's entrepreneurial performance. Policymakers and researchers should adopt a holistic approach that takes into account the complex interplay of various ecosystem factors in shaping women's entrepreneurial outcomes.

Table 5.12: Control Variables

Path	Original sample (O)	Standard deviation (STDEV)	t-statistics (O/STDEV)	P values
Age -> MAR	-0.043	0.038	1.149	0.251
Age -> OPE	-0.063	0.048	1.32	0.187
Dependents -> MAR	0.032	0.035	0.906	0.365
Dependents -> OPE	0.067	0.043	1.562	0.118
Education -> MAR	0.02	0.044	0.448	0.654
Education -> OPE	0.062	0.055	1.143	0.253
Experience -> MAR	0.01	0.044	0.221	0.825
Experience -> OPE	0.046	0.05	0.904	0.366
Marital -> MAR	-0.069	0.037	1.89	0.059
Marital -> OPE	-0.061	0.045	1.355	0.175
Sector -> MAR	-0.017	0.037	0.469	0.639
Sector -> OPE	0.024	0.045	0.54	0.59
size -> MAR	0.021	0.036	0.57	0.569
size -> OPE	-0.038	0.045	0.853	0.394

Source: (Author, 2024)

Figure 5.2: Direct Structural model



Source: (Author, 2024)

5.11 Moderating Analysis

The study investigated the moderating effects of entrepreneurial identity-individual antecedents (EII) and entrepreneurial identity-socio-cultural antecedents (EIS) on the relationship between various independent variables (regulations (REG), networks (NET), innovation (INN), infrastructure (INF), education (EDU), and culture (CUL)) and entrepreneurial performance (market performance (MAR) and operational performance (OPE)) among women entrepreneurs in Ghana. The findings of the moderating analysis reveal that most of the interaction effects are not statistically significant at the 5% level, indicating that the moderating variables (EII and EIS) do not significantly influence the relationship between the independent variables and entrepreneurial performance. However, there are two exceptions: the moderating effect of EII on the relationship between networks and market performance, and the moderating effect of EII on the relationship between culture and market performance.

The interaction term EII x NET \rightarrow MAR has a positive and significant effect ($\beta = 0.111$, $p = 0.035$), suggesting that entrepreneurial identity-individual antecedents positively moderate the relationship between networks and market performance. This finding implies that women entrepreneurs in Ghana who have strong individual-level entrepreneurial identities can better leverage their networks to enhance their market performance. Networks can provide access to resources, information, and support systems that are crucial for entrepreneurial success (Amoako et al., 2018; Sefiani et al., 2018). Women entrepreneurs with strong individual entrepreneurial identities are more likely to actively engage in networking activities and build strong relationships with other entrepreneurs, mentors, and stakeholders, which can lead to better market outcomes.

On the other hand, the interaction term EII x CUL \rightarrow MAR has a negative and significant effect ($\beta = -0.113$, $p = 0.024$), indicating that entrepreneurial identity-individual antecedents negatively moderate the relationship between culture and market performance. This finding suggests that when women entrepreneurs in Ghana have strong individual-level entrepreneurial identities, the negative impact of certain cultural factors on their market performance may be amplified. Cultural norms, values, and expectations that are not supportive of women's entrepreneurial activities can create barriers and limit their ability to succeed in the market (Acheampong, 2018; Adom & Asare-Yeboah, 2016). Women entrepreneurs with strong individual entrepreneurial identities may be more likely to challenge these cultural barriers, which could lead to increased resistance and negatively affect their market performance.

The insignificance of the other interaction terms suggests that the moderating variables (EII and EIS) do not significantly influence the relationship between the other independent variables (regulations, innovation, infrastructure, and education) and entrepreneurial performance (market and operational) among women entrepreneurs in Ghana. This finding

does not necessarily imply that these independent variables are not important for women's entrepreneurial success; rather, it indicates that the strength of individual and socio-cultural entrepreneurial identities does not significantly alter their effects on entrepreneurial performance.

The implications of these findings for women entrepreneurs in Ghana are twofold. First, the positive moderating effect of EII on the relationship between networks and market performance underscores the importance of building and leveraging social capital for entrepreneurial success, particularly for women with strong individual entrepreneurial identities. Women entrepreneurs should actively seek out networking opportunities, join entrepreneurial associations, and establish strong relationships with mentors and peers. Policymakers and support organizations can facilitate networking by creating platforms for women entrepreneurs to connect, share experiences, and collaborate. Second, the negative moderating effect of EII on the relationship between culture and market performance highlights the need to address cultural barriers that hinder women's entrepreneurial activities in Ghana, especially for women with strong individual entrepreneurial identities. Policymakers and society at large should work towards creating a more supportive and inclusive entrepreneurial ecosystem that challenges gender stereotypes and provides equal opportunities for women entrepreneurs. This may involve public awareness campaigns, gender-sensitive policies, and targeted support programs that empower women entrepreneurs to overcome cultural obstacles.

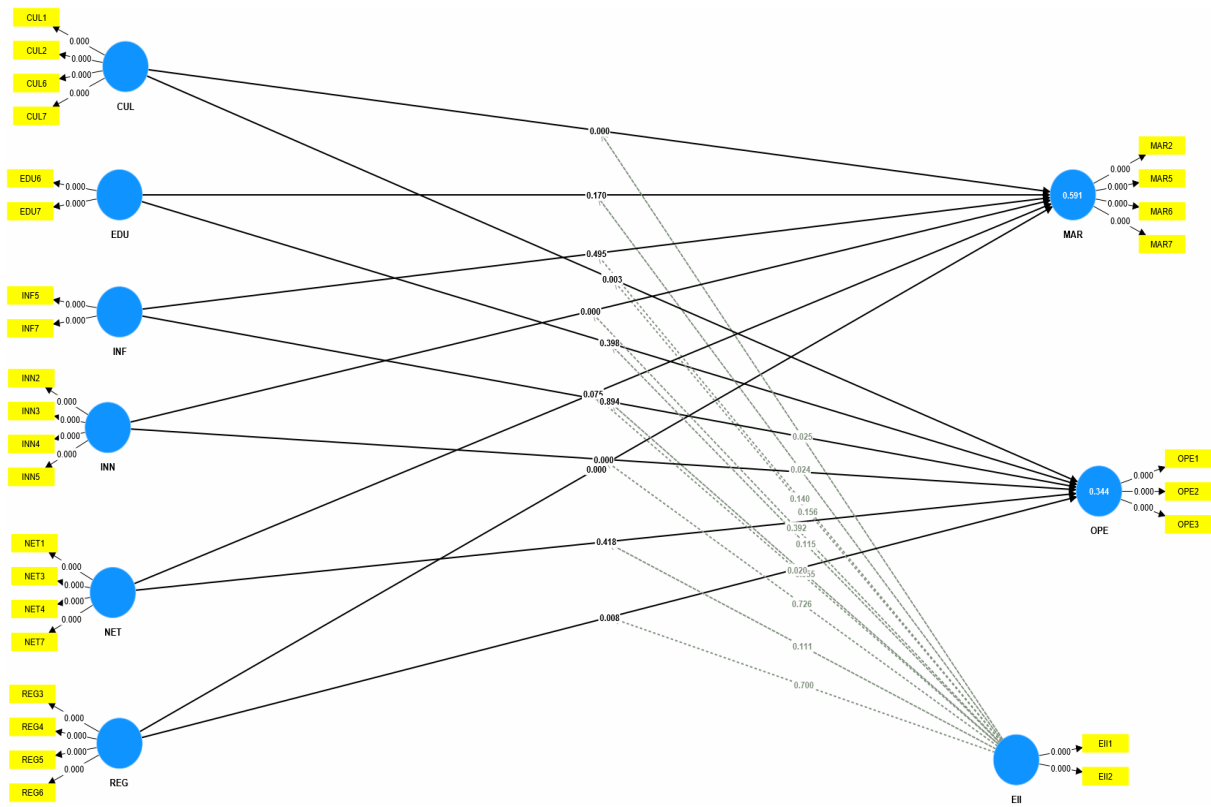
Table 5.13: Moderating analysis

Path	Original sample (O)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
EII x REG -> MAR	-0.009	0.053	0.166	0.868
EII x REG -> OPE	-0.016	0.061	0.261	0.794
EIS x REG -> MAR	-0.049	0.047	1.057	0.29
EIS x REG -> OPE	-0.062	0.056	1.11	0.267

EII x NET -> MAR	0.111	0.053	2.108	0.035
EII x NET -> OPE	0.095	0.06	1.575	0.115
EIS x NET -> MAR	0.023	0.051	0.454	0.65
EIS x NET -> OPE	-0.034	0.055	0.613	0.54
EII x INN -> MAR	0.038	0.053	0.726	0.468
EII x INN -> OPE	0.018	0.069	0.262	0.794
EIS x INN -> MAR	0.062	0.055	1.14	0.254
EIS x INN -> OPE	0.073	0.072	1.012	0.312
EII x INF -> MAR	-0.074	0.061	1.22	0.223
EII x INF -> OPE	-0.059	0.062	0.949	0.343
EIS x INF -> MAR	0.017	0.047	0.364	0.716
EIS x INF -> OPE	0.008	0.052	0.152	0.879
EII x EDU -> MAR	-0.085	0.046	1.851	0.064
EII x EDU -> OPE	-0.08	0.055	1.446	0.148
EIS x EDU -> MAR	-0.029	0.041	0.706	0.48
EIS x EDU -> OPE	0.026	0.048	0.548	0.584
EII x CUL -> MAR	-0.113	0.05	2.26	0.024
EII x CUL -> OPE	-0.093	0.064	1.453	0.146
EIS x CUL -> MAR	-0.018	0.053	0.341	0.733
EIS x CUL -> OPE	-0.005	0.069	0.074	0.941

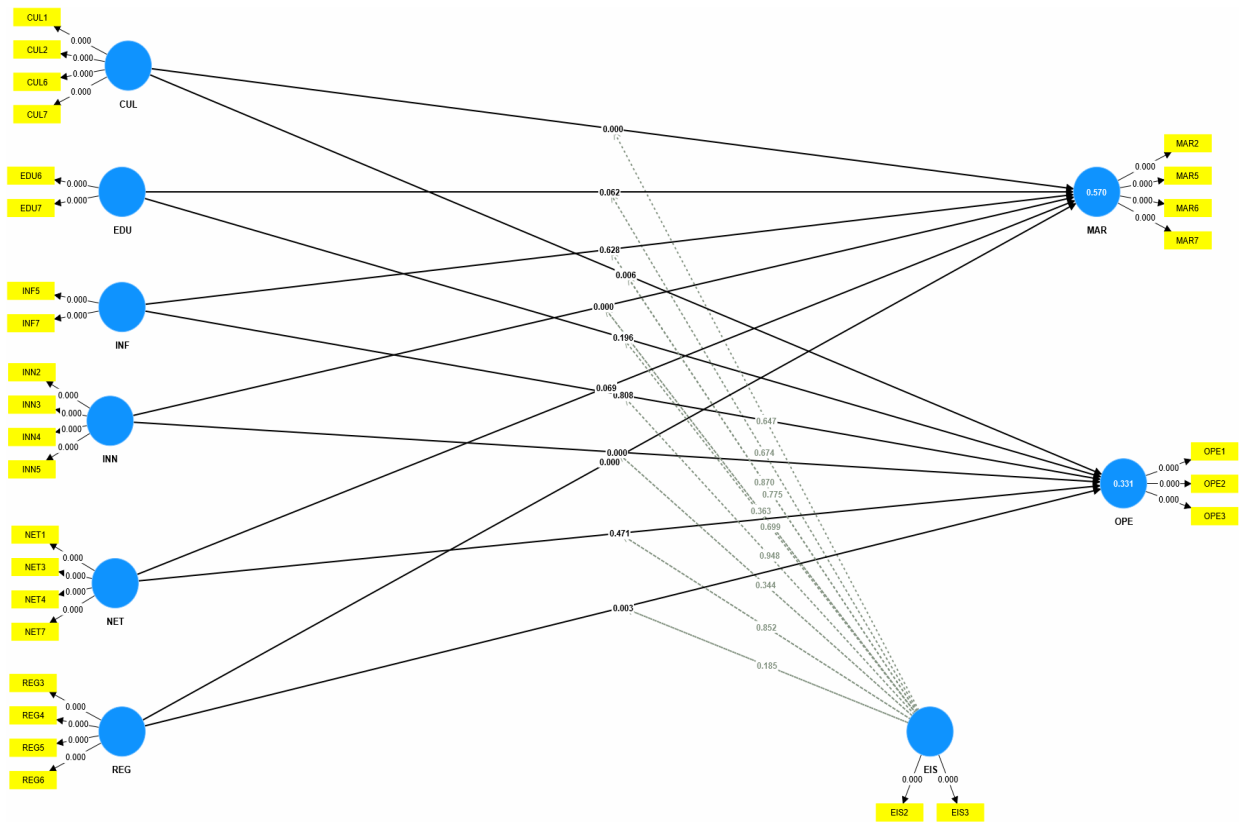
Source:(Author, 2024)

Figure 5.14a: Moderating role of EII



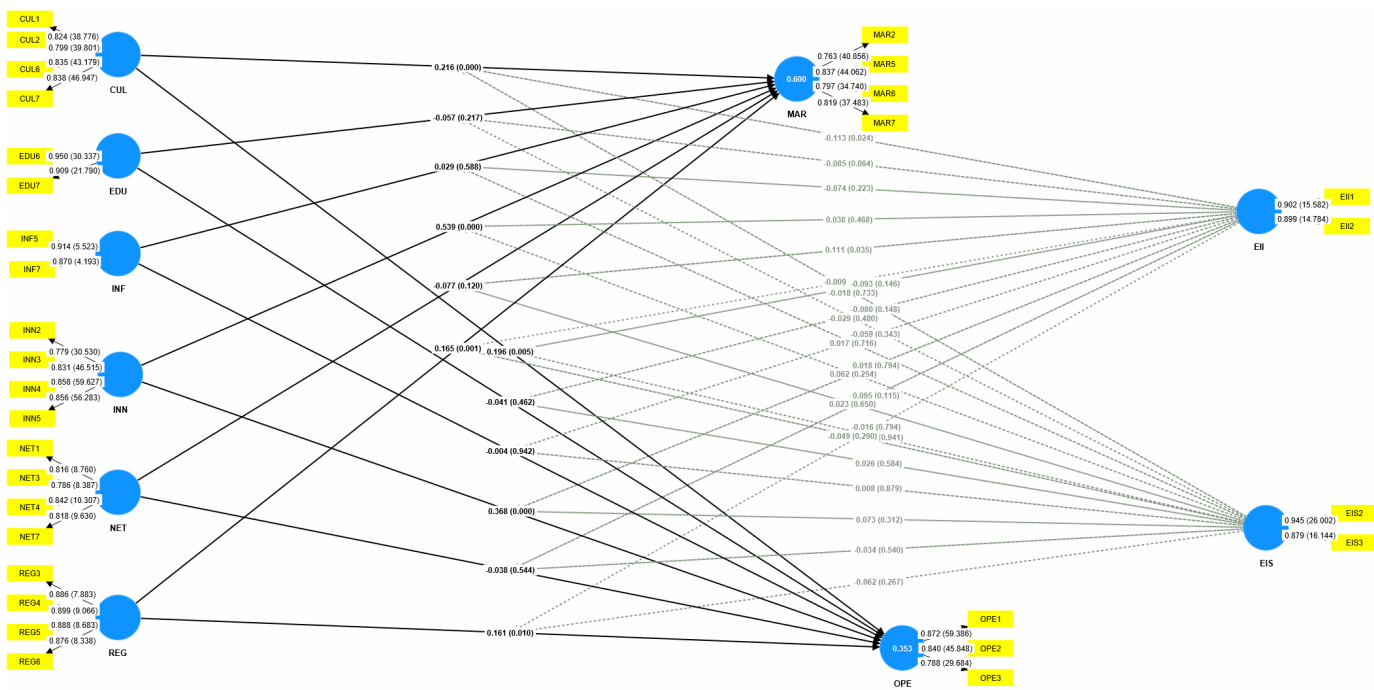
Source: (Author, 2024)

Figure 5.14b: Moderating role of EIS



Source: (Author, 2024)

Figure 5.14: Moderating analysis



Source: (Author, 2024)

5.13 Predictive Accuracy and relevance of endogenous variables

The table presents the results of predictive accuracy and relevance for the endogenous variables (MAR2, MAR5, MAR6, MAR7, OPE1, OPE2, and OPE3) in the study using two different approaches: PLS-SEM (Partial Least Squares Structural Equation Modeling) and LM (Linear Regression Model). The metrics used to assess the predictive performance are Q^2_{predict} , PLS-SEM_RMSE (Root Mean Squared Error), PLS-SEM_MAE (Mean Absolute Error), LM_RMSE, and LM_MAE. The Q^2_{predict} values for all the endogenous variables are positive, ranging from 0.164 to 0.46. Positive Q^2_{predict} values indicate that the PLS path model has predictive relevance for the endogenous variables (Hair et al., 2019). In other words, the model is capable of predicting the values of the endogenous variables with acceptable accuracy. The higher the Q^2_{predict} value, the better the predictive relevance of the model for that particular variable. In this study, MAR2 has the highest Q^2_{predict} value (0.46), suggesting that the model has the best predictive relevance for this variable.

Comparing the predictive performance of PLS-SEM and LM, it can be observed that PLS-SEM generally outperforms LM in terms of both RMSE and MAE for all the endogenous variables. Lower values of RMSE and MAE indicate better predictive accuracy (Shmueli et al., 2019). For example, for MAR2, the PLS-SEM_RMSE (1.047) and PLS-SEM_MAE (0.826) are lower than the LM_RMSE (0.981) and LM_MAE (0.743), suggesting that PLS-SEM provides more accurate predictions than LM for this variable. Similar patterns can be observed for the other endogenous variables, with PLS-SEM consistently showing lower RMSE and MAE values compared to LM.

It can be inferred that the PLS-SEM approach is more suitable for predicting the endogenous variables in this study, which are related to the entrepreneurial performance of women

entrepreneurs in Ghana. The lower prediction errors of PLS-SEM suggest that it captures the complex relationships between the independent variables and the endogenous variables more effectively than the traditional linear regression model (Hair et al., 2019). The predictive relevance and accuracy of the PLS-SEM model lend credibility to the study's findings and conclusions. The model's ability to predict the values of the endogenous variables with acceptable accuracy strengthens the validity of the relationships and effects observed in the study (Shmueli et al., 2019). Furthermore, the predictive relevance of the model highlights the importance of considering the specific independent variables included in the study (e.g., regulations, networks, innovation, infrastructure, education, and culture) when assessing and promoting women's entrepreneurial performance in Ghana. The model's ability to predict the endogenous variables suggests that these independent variables play a significant role in shaping the entrepreneurial outcomes of women entrepreneurs (Acheampong, 2018; Adom & Asare-Yeboah, 2016).

Table 5.14: $Q^2_{predict}$

	$Q^2_{predict}$	PLS- SEM_RMS E	PLS- SEM_MA E	LM_RMS E	LM_MA E
MAR2	0.46	1.047	0.826	0.981	0.743
MAR5	0.313	1.083	0.907	1.114	0.95
MAR6	0.241	1.02	0.85	1.039	0.872
MAR7	0.335	1.01	0.845	1.034	0.863
OPE1	0.24	1.147	0.989	1.16	0.99
OPE2	0.172	1.094	0.93	1.103	0.941
OPE3	0.164	1.141	0.982	1.141	0.974

Source: (Author, 2024)

5.12 Slope analysis for positive moderating effect

Figure 5.3: *EII x CUL*



Table 5.15: Summary of findings and study hypotheses

Hypothesis	Statement	Coefficient	p-value	Decision
H1b1	<i>H1b1: Education and training have a positive and significant relationship with market performance of women entrepreneurs in Ghana.</i>	-0.072	0.110	Not Supported
H1b2	<i>H1b2: Education and training have a positive and significant relationship with the operational performance of women entrepreneurs in Ghana.</i>	-0.059	0.262	Not Supported
H1c1	<i>H1c1: Infrastructure and resources have a positive and significant relationship with the market performance of women entrepreneurs in Ghana.</i>	0.034	0.493	Not Supported
H1c2	<i>H1c2: Infrastructure and resources have a positive</i>	0.007	0.902	Not

	<i>and significant relationship with the operational performance of women entrepreneurs in Ghana.</i>			Supported
H1d1	<i>H1d1: Networking and social capital have a positive and significant relationship market performance of women entrepreneurs in Ghana.</i>	-0.083	0.0110	Not Supported
H1d2	<i>H1d2: Networking and social capital have a positive and significant relationship with the operational performance of women entrepreneurs in Ghana.</i>	-0.051	0.428	Not Supported
H1e1	<i>H1e1: The regulatory environment has a positive and significant relationship with market performance of women entrepreneurs in Ghana.</i>	0.171	0.000	Supported
H1e2	<i>H1e2: The regulatory environment has a positive and significant relationship with the operational performance of women entrepreneurs in Ghana.</i>	0.151	0.011	Supported
H1f1	<i>H1f1: Cultural and societal norms have a negative and significant relationship with market performance of women entrepreneurs in Ghana.</i>	0.208	0.000	Not supported
H1f2	<i>H1f2: Cultural and societal norms have a negative and significant relationship with the operational performance of women entrepreneurs in Ghana.</i>	0.206	0.003	Not supported
H1g1	<i>H1g1: Innovation and knowledge spillover have a positive and significant relationship with market performance of women entrepreneurs in Ghana.</i>	0.541	0.000	supported
H1g2	<i>H1g2: Innovation and knowledge spillover have a positive and significant relationship operational performance of women entrepreneurs in Ghana.</i>	0.361	0.000	supported
H2	<i>H2a Entrepreneurial identity-individual antecedents significantly moderate the relationship between the entrepreneurial ecosystem and the entrepreneurial performance of women in Ghana.</i> <i>H2b Entrepreneurial identity-socio-cultural antecedents significantly moderates the relationship between the entrepreneurial ecosystem and the entrepreneurial performance of women in Ghana</i>			Partially supported Not Supported

CHAPTER SIX

DISCUSSION OF RESULTS

6.0 Introduction

This chapter discusses the findings of the study obtained from the data analysis conducted in the preceding chapter. Discussions were done in relation to extant literature as results are presented in the context of previous studies, the research framework, and the setting of the study, and were structured on the basis of the research questions as well as the formulated hypotheses.

6.1 Implications of Entrepreneurial ecosystems and women entrepreneurial performance

The hypotheses (H1a1 and H1a2) of the study postulated that access to finance has a positive and significant relationship on market performance and operational performance of women entrepreneurs in Ghana respectively. The results of the study indicated that access to finance has no significant effect on the market performance of women entrepreneurs hence the stated hypothesis H1a1 was not supported. Furthermore, the relationship between access to finance and the operational performance of women entrepreneurs was not statistically significant hence the hypothesis H1a2 was also not supported.

The findings of the study, which indicate that access to finance does not have a significant effect on the market performance and operational performance of women entrepreneurs in Ghana, are in line with some recent studies in the field. A study conducted by Khaleque (2018) in a similar context found that access to finance did not have a significant impact on the financial performance of women-owned businesses. This suggests that the relationship between access to finance and performance outcomes may not be as straightforward as

previously thought. Factors such as business skills, market opportunities, and social networks may also play a significant role in driving performance outcomes for women entrepreneurs. Another relevant study by Aliyu, Ahmad and Nordin, (2019) explored the relationship between access to finance and performance in small and medium-sized enterprises (SMEs) in developing economies. The study found that access to finance was positively associated with SME growth, the relationship was statistically significant for women-led enterprises. This highlights the need to consider other factors, such as gender biases and social norms, that may influence the effectiveness of financial resources in driving performance outcomes for women entrepreneurs. The implications of the finding are twofold. Firstly, the results of the study suggest that addressing the gender gap in access to finance alone may not be sufficient to improve the market and operational performance of women entrepreneurs. Policymakers and stakeholders should adopt a more holistic approach that considers other factors such as capacity-building, mentorship, and access to networks. Secondly, the finding underscore the importance of understanding the specific contextual factors that influence the relationship between access to finance and performance outcomes for women entrepreneurs. Cultural norms, institutional barriers, and gender biases can shape women's entrepreneurial experiences and may moderate the impact of financial resources on their performance.

The study further postulated that education and training positively and significantly influence the market and operational performance of women entrepreneurs in Ghana. The findings indicated that education and training have a negative and insignificant effect on both the market performance and the operational performance of women entrepreneurs hence the study hypothesis *H1b1* and *H1b2* were not supported.

Regarding education and training, the study's findings, which show a negative and insignificant effect on women's entrepreneurial performance, differ from some previous studies. For example, Berii (2019) and Endalew (2020) reported a positive and significant impact of education on women's entrepreneurial performance in similar African contexts. These contrasting results suggest that the relationship between education and women's entrepreneurial success may vary depending on the specific context and the quality and relevance of educational programs.

The study's findings on the negative and insignificant effect of education and training on women's entrepreneurial performance in Ghana have important implications for understanding the role of education in fostering women's entrepreneurial success. These results challenge the conventional wisdom that higher levels of education always lead to better entrepreneurial outcomes and suggest that the relationship between education and women's entrepreneurial performance is more complex and context-dependent. The negative and insignificant effect of education on women's entrepreneurial performance in Ghana may indicate that the current educational programs and training initiatives are not adequately preparing women for the challenges and opportunities of entrepreneurship. This could be due to various factors, such as the quality and relevance of the educational content, the lack of practical skills training, or the limited access to mentorship and networking opportunities. Moreover, the contrasting results between this study and previous studies by Berii (2019) and Endalew (2020), which found a positive and significant impact of education on women's entrepreneurial performance in similar African contexts, highlight the importance of considering the specific context when examining the relationship between education and entrepreneurial success. The effectiveness of educational programs in fostering women's entrepreneurship may depend on factors such as the local business environment, cultural norms, and the availability of support systems.

The findings highlight the need for a more holistic approach to supporting women's entrepreneurship, one that goes beyond formal education and training. While education is undoubtedly important, it is not the only factor influencing women's entrepreneurial performance. By adopting a comprehensive approach that combines education with other support mechanisms, Ghana can create a more conducive environment for women entrepreneurs to thrive.

Furthermore, the study's findings underscore the importance of context-specific research and the need for a nuanced understanding of the factors influencing women's entrepreneurial success in different settings. Future research should delve deeper into the specific challenges and opportunities faced by women entrepreneurs in Ghana, examining how various elements of the entrepreneurial ecosystem interact to shape their performance. By developing a more granular understanding of the local context, researchers can inform the design of targeted interventions and policies that effectively support women's entrepreneurship.

The study further hypothesized that infrastructure and resources positively and significantly influence women entrepreneurial performance. However, the results of the study postulated that the availability of infrastructure and resources has a positive but insignificant effect on both the market and operational performance of Ghanaian women entrepreneurs. Hence, the study hypotheses H1c1 and H1c2 were not supported. These findings suggest that while infrastructure and resources may have a positive influence on women's entrepreneurial performance, their impact is not statistically significant in the Ghanaian context.

The study's findings on the insignificant impact of infrastructure and resources on women's entrepreneurial performance in Ghana provide valuable insights into the complex relationship between infrastructure and entrepreneurial success. These results diverge from the conclusions of previous studies by Danga et al. (2019) and Tekele (2019), which reported that

inadequate infrastructure hinders the performance of women entrepreneurs in developing economies. The insignificant impact of infrastructure and resources on women's entrepreneurial performance in Ghana suggests that, contrary to expectations, the availability or lack of infrastructure may not be a critical determinant of women's entrepreneurial success in this specific context. This finding challenges the assumption that improving infrastructure alone will automatically lead to better entrepreneurial outcomes for women.

The study postulated that cultural and societal norms have a negative and significant relationship with market and operational performance of women entrepreneurs in Ghana. However, the results of the study indicated that cultural and social factors within the Ghanaian ecosystem positively and significantly influence the entrepreneurial performance of women in Ghana, supporting the study hypotheses H1f1 and H1f2. These findings suggest that cultural and societal factors play a crucial role in shaping the success of women entrepreneurs in the Ghanaian context. The findings supports the works of (Sallah and Caesar, 2022; ChoudhuryKaul, Supriyadi and Fahlevi, 2023) who reported a positive impact of social and cultural factors in influencing the performance of women entrepreneurs.

The implications of these findings underscore the need for interventions and policies that continuously challenge and transform cultural and societal norms to create a more supportive environment for women entrepreneurs. Efforts should be made to continuously promote gender equality, challenge gender stereotypes, and provide opportunities for women to access resources, networks, and mentorship. Additionally, educational initiatives and awareness campaigns can help to equally enhance cultural perceptions and promote the recognition of women's entrepreneurial capabilities.

The study postulated that the innovation and knowledge spillover positively influence the entrepreneurial performance of women in Ghana. The results of the study indicated that

innovation and knowledge spillover have a positive and significant impact on both the market performance and operational performance hence supporting the study hypothesis. The findings of the study support the works of Chávez-Rivera, Ruíz-Jiménez and Fuentes-Fuentes (2023); Taleb, Hashim and Zakaria (2023) and Chávez-Rivera, Ruíz-Jiménez and Fuentes-Fuentes, (2023) who concluded that innovation positively influences the performance of women entrepreneurs.

The implications of these findings suggest that fostering a culture of innovation and facilitating knowledge spillover can significantly contribute to enhancing the performance of women entrepreneurs. Policymakers and stakeholders should focus on creating an environment that encourages and supports innovation, such as providing access to research and development resources, promoting collaboration between academia and industry, and facilitating knowledge-sharing networks. Additionally, initiatives that promote entrepreneurship education and training can equip women entrepreneurs with the skills and knowledge necessary to innovate and capitalize on knowledge spillover. Encouraging women's participation in networking events, conferences, and industry associations can also facilitate knowledge exchange and spillover.

6.2 Discrepancies and their implications

Some aspects of the findings of the study did not support previous empirical findings. These discrepancies in the current study and previous empirical studies may be due to various factors that are enumerated below.

First, the study's measurement of infrastructure and resources may not have captured the specific infrastructure-related challenges faced by women entrepreneurs in Ghana. The study might have focused on a limited set of infrastructure indicators, such as access to electricity

or transportation, while overlooking other critical aspects, such as digital connectivity or access to market information systems. Future research should adopt a more comprehensive approach to measuring infrastructure, taking into account the diverse range of infrastructure-related factors that may influence women's entrepreneurial performance. Second, the insignificant impact of infrastructure on women's entrepreneurial performance in Ghana may suggest that women entrepreneurs have developed coping strategies to navigate infrastructure-related challenges. Women entrepreneurs may have found alternative ways to access resources, such as relying on informal networks or leveraging mobile technology, which could mitigate the negative impact of inadequate infrastructure on their businesses. This highlights the resilience and adaptability of women entrepreneurs in the face of structural constraints.

Third, the divergence between this study's findings and previous research by Danga et al. (2019) and Tekele (2019) underscores the importance of context-specific research. The impact of infrastructure on women's entrepreneurial performance may vary across different developing economies, depending on factors such as the level of economic development, the quality of existing infrastructure, and the specific cultural and institutional barriers faced by women entrepreneurs. This discrepancy highlights the need for more comparative research to understand how the relationship between infrastructure and women's entrepreneurial success may differ across contexts. The implications of these findings are significant for policymakers and development practitioners seeking to support women's entrepreneurship in Ghana and other developing economies. While improving infrastructure is undoubtedly important, the study's results suggest that a narrow focus on infrastructure alone may not be sufficient to enhance women's entrepreneurial performance. Policymakers should adopt a more holistic approach that addresses the multifaceted challenges faced by women

entrepreneurs, including access to finance, markets, and networks, as well as cultural and institutional barriers.

Moreover, the study's findings highlight the need for more targeted and context-specific interventions to support women's entrepreneurship. Rather than assuming that a one-size-fits-all approach to infrastructure development will automatically benefit women entrepreneurs, policymakers should engage with women entrepreneurs directly to understand their specific needs and challenges. This may involve conducting participatory research, establishing feedback mechanisms, and involving women entrepreneurs in the design and implementation of support programs. Finally, the discrepancy between this study's findings and previous research as already highlighted in the discussion of results underscores the importance of continuous learning and adaptation in the field of women's entrepreneurship development. As the global landscape evolves and new challenges emerge, researchers and practitioners must remain open to new insights and be willing to revisit assumptions based on emerging evidence. By fostering a culture of learning and evidence-based policymaking, we can develop more effective strategies to support women entrepreneurs and drive inclusive economic growth.

The study also postulated that networking and social capital have a positive and significant relationship with performance (market and operational) of women entrepreneurs in Ghana. However, the results of the study reported a negative but insignificant impact of network and social capital on the market performance and operational performance of women entrepreneurs in Ghana. The study hypotheses H1d1 and H1d2 were subsequently not supported. These findings suggest that networking and social capital, as measured in this study, do not have a significant positive influence on the entrepreneurial performance of women in Ghana. The findings of the study conflicts the findings of (Shams and Nasri, 2018; Endalew, 2020) who reported a positive and significant effect of social capital and

information on women performance. The findings suggest that while networking and social capital can be beneficial for women entrepreneurs, their impact may vary depending on specific contextual factors. Policymakers and stakeholders should focus on creating an enabling environment that fosters the development of strong and supportive social networks, while also addressing potential barriers and biases that may limit women's access to networking opportunities. Additionally, it is important to consider the quality and diversity of networks, as well as the skills and resources that entrepreneurs bring to their networks. Providing training and support to women entrepreneurs in building effective networking skills and leveraging social capital can enhance their ability to access resources and opportunities. Further research is needed to explore the mechanisms and contextual factors influencing the relationship between networking, social capital, and women's entrepreneurial performance in the Ghanaian context. Understanding the specific dynamics and identifying strategies to overcome barriers and biases can inform targeted interventions and support mechanisms for women entrepreneurs.

6.3 The moderating role of entrepreneurial identity on the direct relationship between entrepreneurial ecosystems and entrepreneurial performance

The study examined the moderating effects of entrepreneurial identity-individual antecedents (EII) and entrepreneurial identity-socio-cultural antecedents (EIS) on the relationship between various entrepreneurial ecosystem factors and the entrepreneurial performance of women in Ghana. The findings provide partial support for the hypotheses *H2a* and *H2b*.

Regarding hypothesis *H2a*, the study found that entrepreneurial identity-individual antecedents (EII) significantly moderate the relationship between networks and market performance, as well as the relationship between culture and market performance. The

positive moderating effect of EII on the relationship between networks and market performance aligns with previous research by Amoako (2018) and Sefiani et al. (2018), who highlighted the importance of networks in providing access to resources, information, and support systems crucial for entrepreneurial success. This finding suggests that women entrepreneurs with strong individual entrepreneurial identities are better positioned to leverage their networks to enhance their market performance. However, the negative moderating effect of EII on the relationship between culture and market performance is a novel finding that contrasts with previous studies. Acheampong (2018) and Adom and Asare-Yeboah (2016) reported that cultural norms and expectations unsupportive of women's entrepreneurial activities can create barriers and limit their success. The current study's finding suggests that women entrepreneurs with strong individual entrepreneurial identities may face increased resistance when challenging these cultural barriers, negatively affecting their market performance. This highlights the complex interplay between individual entrepreneurial identity and cultural factors in shaping women's entrepreneurial outcomes. The insignificance of EII in moderating the relationships between other entrepreneurial ecosystem factors (regulations, innovation, infrastructure, and education) and entrepreneurial performance partially supports hypothesis H2a. While these factors may still be important for women's entrepreneurial success, the strength of individual entrepreneurial identity does not significantly alter their effects on performance.

Regarding hypothesis *H2b*, the study found no significant moderating effects of entrepreneurial identity-socio-cultural antecedents (EIS) on the relationships between entrepreneurial ecosystem factors and entrepreneurial performance. This finding does not support hypothesis H2b, suggesting that the strength of socio-cultural entrepreneurial identity does not significantly influence the impact of ecosystem factors on women's entrepreneurial performance in Ghana. The lack of significant moderating effects of EIS contrasts with

previous research that emphasizes the importance of socio-cultural factors in shaping entrepreneurial outcomes. For example, Acheampong (2018) and Adom and Asare-Yeboah (2016) highlighted the role of cultural norms and expectations in influencing women's entrepreneurial activities. The current study's findings suggest that the strength of socio-cultural entrepreneurial identity may not significantly alter the impact of ecosystem factors on performance, indicating a need for further research to understand the complex dynamics between socio-cultural factors and entrepreneurial outcomes.

The study's findings have important implications for supporting women's entrepreneurship in Ghana. Policymakers and support organizations should focus on facilitating networking opportunities and creating platforms for women entrepreneurs to connect, share experiences, and collaborate, particularly for those with strong individual entrepreneurial identities. Additionally, efforts should be made to address cultural barriers hindering women's entrepreneurial activities and create a more supportive and inclusive entrepreneurial ecosystem.

In essence, the study provides partial support for hypothesis H2a, highlighting the significant moderating effects of entrepreneurial identity-individual antecedents on the relationships between networks, culture, and market performance. However, the findings do not support hypothesis H2b, as entrepreneurial identity-socio-cultural antecedents did not significantly moderate the relationships between ecosystem factors and entrepreneurial performance. These findings contribute to the understanding of the complex interplay between individual and socio-cultural factors in shaping women's entrepreneurial outcomes in Ghana and underscore the need for targeted interventions to support women entrepreneurs in navigating the challenges posed by their entrepreneurial ecosystem.

6.4 Conclusions

The discussion of findings reveals complex relationships between entrepreneurial ecosystem elements and women entrepreneurs' performance in Ghana. Several key findings challenge conventional wisdom: access to finance, education levels, and infrastructure availability showed no significant effect on performance, while cultural factors and innovation demonstrated positive significant impacts. These results suggest that the relationship between ecosystem elements and entrepreneurial success is more nuanced than previously understood in the Ghanaian context. The moderating role of entrepreneurial identity provided mixed results, with individual antecedents significantly moderating only the relationships between networks, culture, and market performance, while socio-cultural antecedents showed no significant moderating effects. This suggests that personal identity traits may be less influential in determining business success than previously theorized, particularly in the Ghanaian context. These findings contribute to both theory and practice by highlighting the complex interplay between ecosystem elements and women's entrepreneurial performance. They challenge assumptions about traditional success factors while emphasizing the importance of cultural support and innovation. The results suggest the need for a more holistic and context-specific approach to supporting women entrepreneurs in Ghana, one that considers the unique cultural and social dynamics of the environment while fostering innovation and knowledge sharing.

CHAPTER SEVEN

SUMMARY, CONTRIBUTIONS, CONCLUSION AND IMPLICATIONS

7.0 Introduction

This chapter summarizes the entire study by presenting the rationale, research objectives and the findings from the analyses of data. From these, conclusions are drawn, and relevant implications outlined, together with contributions emanating from the study.

7.1 Summary of the Study research and major findings

The purpose of the study was to assess the moderating role of entrepreneurial identity on the direct relationship between entrepreneurial ecosystems and entrepreneurial performance. Entrepreneurial ecosystem was conceptualized and proxied by seven variables- access to finance, education and training, infrastructure and resources, networking and social capital, regulatory environment, cultural and social factors as well as innovation and knowledge spillover. Entrepreneurial performance was proxied by market and operational performance and identity was used as a moderating variable.

Table 7.1: Summary of major findings

Study Objectives	Findings
Objective one Investigate the effects of the dimensions of entrepreneurial ecosystem on performance of entrepreneurial women in Ghana.	<p>The study findings indicated that education and training have a negative and insignificant effect on both the market performance and the operational performance of women entrepreneurs.</p> <p>With regards to assessing the availability of infrastructure and resources to determine how it influence the performance of women entrepreneurs in Ghana. The results a positive but insignificant effect on both the market and operational performance of Ghanaian women entrepreneurs.</p> <p>On assessing the impact of network and social capital to explore how it influences the entrepreneurial performance of women in Ghana. The results reported a negative but insignificant impact of network and social capital on the market performance and operational performance of women entrepreneurs in Ghana.</p>

	<p>Regarding the regulatory environment and women's entrepreneurial performance, the results indicated a positive and significant relationship between the regulatory environment and both market performance and operational performance.</p> <p>On the cultural and social factors within the Ghanaian ecosystem results highlighted positive and significant influence on the entrepreneurial performance of women in Ghana.</p> <p>Finally, on the impact of innovation and knowledge spillover on the entrepreneurial performance of women in Ghana. The results indicated that innovation and knowledge spillover have a positive and significant impact on both the market performance and operational performance of women entrepreneurs in Ghana.</p>
<p>Objective two Determine the extent to which women entrepreneurial identity moderates the relationship between entrepreneurial ecosystem and performance of entrepreneurial women in Ghana.</p>	<p>The results revealed interesting insights into the impact of Ghana's entrepreneurial ecosystem and entrepreneurial identity on women's entrepreneurial performance. The moderating role of entrepreneurial identity-individual antecedents (EII) and entrepreneurial identity-socio-cultural antecedents (EIS) on the relationship between various entrepreneurial ecosystem factors and women's entrepreneurial performance was examined.</p> <p>The analysis indicated that most of the interaction effects were not statistically significant at the 5% level, suggesting that EII and EIS do not significantly moderate the relationship between the entrepreneurial ecosystem factors and women's entrepreneurial performance in most cases</p>

7.2 Theoretical implications and contributions of the study to the Process Theory

The study's findings made several significant contributions to Process Theory through examining women's entrepreneurship in Ghana. The study revealed that education and training had a negative and insignificant effect on both market and operational performance. This finding expands Process Theory by demonstrating that educational outcomes are mediated by social processes, including resource access and cultural norms. It challenges the linear assumption of education's impact, suggesting that the quality and relevance of education, combined with supportive networks and role models, are more critical in shaping entrepreneurial outcomes (Jennings & Brush, 2013; Light, 2006). The finding that infrastructure and resources had a positive but insignificant effect on performance extends

Process Theory by highlighting the importance of resource utilization rather than mere availability. This contribution emphasizes how resource dependencies, power dynamics, and institutional arrangements influence entrepreneurial outcomes, expanding our understanding of resource-performance relationships (Aldrich & Fiol, 1994; Marlow & McAdam, 2013).

The negative but insignificant impact of networking and social capital on performance contributes to Process Theory by demonstrating the context-specific nature of social capital. This finding enhances theoretical understanding of how network quality, diversity, and norms of reciprocity interact with individual attributes and institutional arrangements to influence entrepreneurial success (Goss, 2015; Kianto & Waajakoski, 2010). The positive and significant relationship between regulatory environment and performance advances Process Theory by demonstrating how institutional frameworks interact with individual agency and social norms. This contribution highlights the role of enforcement effectiveness and supportive institutions in entrepreneurial outcomes (Bruton et al., 2010; Welter & Smallbone, 2011). Similarly, the positive and significant impact of cultural and social factors on performance enriches Process Theory by illuminating how gender roles, stereotypes, and expectations shape entrepreneurial opportunities and outcomes. This finding extends theoretical understanding of how cultural factors influence resource access and support systems (Gupta et al., 2020).

The positive and significant impact of innovation and knowledge spillover on performance contributes to Process Theory by demonstrating the importance of knowledge creation and transfer in entrepreneurial processes. This finding advances theoretical understanding of how collaborations and knowledge-sharing networks facilitate entrepreneurial success (Autio et al., 2014). The finding that entrepreneurial identity did not significantly moderate the ecosystem-performance relationship extends Process Theory by suggesting that contextual factors may have stronger influences than individual identity in shaping entrepreneurial

outcomes. This contributes to understanding how individual-society interactions are shaped by cultural norms, personal experiences, and socialization processes (Ucbasaran et al., 2013).

These contributions collectively enhance Process Theory by demonstrating the complex interplay between individual, social, and institutional factors in shaping women's entrepreneurial outcomes in developing economies. The findings highlight the need for a more nuanced understanding of how different ecosystem elements interact to influence entrepreneurial performance in specific contexts.

7.3 Practical Implications of the Study

7.3.1 Practical Implications to Academia

The study's finding that women entrepreneurs' formal education levels had a negative and insignificant effect on their business performance in Ghana challenges existing assumptions about education's role in entrepreneurial success. This finding is particularly noteworthy as the study specifically examined formal education levels rather than educational content or teaching methods. This result suggests that academia needs to investigate why higher levels of formal education do not necessarily translate into improved business performance among women entrepreneurs in developing economies. Scholars should examine how different educational backgrounds interact with entrepreneurial capabilities and whether alternative forms of learning might be more relevant for business success. The finding regarding infrastructure and resource availability prompts academia to deepen research into how women entrepreneurs utilize available resources regardless of their formal education levels. Scholars need to investigate the mechanisms through which entrepreneurs with varying educational backgrounds access and leverage infrastructural resources. This includes examining whether formal education influences resource utilization patterns and if there are

differences in how entrepreneurs with different educational levels navigate institutional barriers to access resources.

Academia's attention should focus on understanding the complexities of knowledge acquisition and application among women entrepreneurs with different educational backgrounds. Research should explore how women entrepreneurs develop and apply business knowledge, regardless of their formal education levels. This includes investigating whether informal learning mechanisms might be more effective than formal education in developing entrepreneurial capabilities, and how experiential learning contributes to business success. The positive impact of innovation and knowledge spillover on performance suggests that academia should examine how entrepreneurs with different educational levels engage with and adopt innovations. Research should investigate whether formal education levels influence innovation adoption patterns and knowledge transfer mechanisms. This includes studying how women entrepreneurs with varying educational backgrounds access and utilize new business knowledge and technologies, and whether education levels affect their ability to benefit from knowledge spillovers within their business environment.

7.3.2 Practical Implications for practitioners

- a) For practitioners within the education and training it is important that they are encouraged to broaden their perspective on women's entrepreneurial development. Instead of solely focusing on formal education, practitioners should emphasize the acquisition of practical skills, business management training, and mentorship programs.
- b) On the ecosystem there is a need to create an inclusive entrepreneurial ecosystem that supports women entrepreneurs from diverse educational backgrounds. By recognizing

the importance of practical skills and tailored training, practitioners can enhance the capacity of women entrepreneurs and promote their success. The availability of infrastructure and resources has a positive but insignificant impact on women entrepreneurs' performance sheds light on the challenges women face in accessing necessary resources. This is valuable for ecosystem practitioners as it emphasizes the significance of providing adequate infrastructure and resources to support women's entrepreneurial endeavors. Practitioners can work towards improving physical infrastructure, such as reliable transportation, access to utilities, and affordable workspace. By addressing the resource gaps, practitioners can create an enabling environment that empowers women entrepreneurs and facilitates their growth.

- c) On the networking and social capital which has a negative but insignificant impact on women entrepreneurs' performance, there is a need for practitioners to go beyond simplistic notions of networking. Instead of assuming that building networks alone will lead to success, practitioners should focus on creating diverse and inclusive networks that provide tangible value to women entrepreneurs. This can be achieved by facilitating networking opportunities, mentorship programs, and platforms for knowledge exchange. By fostering meaningful connections and support systems, practitioners can help women entrepreneurs leverage their networks effectively.
- d) On practitioners creating a supportive regulatory, the positive and significant relationship between the regulatory environment and women entrepreneurs' performance highlights the importance of creating a supportive regulatory framework. Practitioners can work towards advocating for policies and regulations that promote women's entrepreneurship, such as simplifying business registration processes, providing tax incentives, and ensuring equal access to resources and opportunities. By

creating a favorable regulatory environment, practitioners can remove obstacles and enable women entrepreneurs to thrive.

- e) On, practitioners of cultural and social factors within the Ghanaian ecosystem positively influence women entrepreneurs' performance underscores the importance of fostering a supportive cultural environment. Practitioners can play a vital role in promoting positive societal attitudes towards women's entrepreneurship. This can be achieved through awareness campaigns, educational initiatives, and targeted interventions that celebrate successful women entrepreneurs and challenge gender stereotypes. By creating a culture that values and supports women's entrepreneurial endeavors, practitioners can empower women to overcome societal barriers and achieve their full potential.
- f) On innovation and knowledge creators (practitioners) the spillover has a positive and significant impact on women entrepreneurs' performance emphasizes the importance of fostering a culture of innovation and knowledge sharing. Practitioners can facilitate access to knowledge resources, such as training programs, workshops, and industry events, to help women entrepreneurs stay updated with the latest trends and best practices. By promoting collaboration and knowledge exchange among women entrepreneurs, practitioners can create a vibrant ecosystem that encourages innovation and drives business growth.

7.3.3 Practical implications to policy makers

The finding that education and training have a negative and insignificant effect on women entrepreneurs' performance challenges the notion that formal education alone guarantees entrepreneurial success (Bird and Brush, 2020). This finding is valuable for policy makers in developing economies like Ghana as it emphasizes the importance of practical skills

development and tailored training programs. Policy makers can invest in entrepreneurship education that provides women with practical business management skills and fosters an entrepreneurial mindset. By recognizing the significance of practical skills and inclusive training, policy makers can enhance women entrepreneurs' capacity and empower them to succeed. Also, finding that the availability of infrastructure and resources has a positive but insignificant impact on women entrepreneurs' performance sheds light on the challenges faced by women entrepreneurs in accessing essential resources. This finding is particularly relevant to policy makers in developing economies like Ghana, where limited infrastructure can hinder entrepreneurial activities. Policy makers can prioritize infrastructure development, including reliable transportation, access to utilities, and affordable workspaces. Additionally, policies should aim to improve women entrepreneurs' access to credit facilities, technology, market information, and supportive networks. By addressing resource gaps and improving infrastructure, policy makers can create an enabling environment that facilitates women entrepreneurs' growth and success.

Furthermore, finding that networking and social capital have a negative but insignificant impact on women entrepreneurs' performance highlights the need for policy makers to go beyond simplistic approaches to networking. Instead, policy makers should focus on creating diverse and inclusive networks that provide tangible value to women entrepreneurs. They can foster networking opportunities, mentorship programs, and platforms for knowledge exchange. Moreover, policies should promote gender-balanced participation in business networks and encourage collaborations between women entrepreneurs and other stakeholders. By fostering meaningful networking and social capital, policy makers can enhance women entrepreneurs' access to resources, knowledge, and support systems. The finding of a positive and significant relationship between the regulatory environment and women entrepreneurs' performance calls for policy makers to critically examine existing regulations and their

impact on women's entrepreneurship. Policy makers in developing economies like Ghana can implement regulatory reforms that support women entrepreneurs. This includes simplifying bureaucratic procedures, reducing barriers to entry, and ensuring gender-responsive policies. Policy makers can also facilitate awareness campaigns and support services to help women entrepreneurs navigate the regulatory landscape. By creating a favorable regulatory environment, policy makers can remove obstacles and create an enabling ecosystem for women entrepreneurs in Ghana and other developing economies.

Furthermore, finding that cultural and social factors within the Ghanaian ecosystem positively influence women entrepreneurs' performance highlights the importance of fostering a supportive cultural environment. Policy makers in developing economies like Ghana can play a crucial role in promoting positive attitudes towards women's entrepreneurship. They can implement policies that promote gender equality, create awareness campaigns to celebrate successful women entrepreneurs, and support educational initiatives that empower women. By creating a supportive cultural environment that recognizes and values women's entrepreneurship, policy makers can pave the way for women to overcome societal barriers and achieve their full potential. The finding that innovation and knowledge spillover have a positive and significant impact on women entrepreneurs' performance emphasizes the importance of fostering a culture of innovation and knowledge sharing. Policy makers can facilitate access to knowledge resources, such as training programs, workshops, and industry events, to help women entrepreneurs stay updated with the latest trends and best practices. By promoting collaboration and knowledge exchange among women entrepreneurs, policy makers can create a vibrant ecosystem that encourages innovation and drives business growth.

7.3.4 Practical Implications for Women Entrepreneurs

This study offers several valuable practical implications for women entrepreneurs in Ghana. First, women entrepreneurs should recognize that formal education alone does not guarantee business success (Bird and Brush, 2020). Instead, they should focus on developing practical business skills through targeted training programs, mentorships, and experiential learning opportunities that address their specific business needs and challenges. Women entrepreneurs should strategically leverage available infrastructure and resources, even when these are limited. The study reveals that while infrastructure has a positive impact, its significance depends on how effectively entrepreneurs utilize these resources. Women should identify creative ways to maximize available resources and advocate for improved access to essential business infrastructure. The finding regarding networking suggests that women entrepreneurs should be selective and strategic in their networking activities. Rather than pursuing networking opportunities indiscriminately, they should focus on building quality connections that provide tangible business value through access to resources, knowledge, and markets (Gupta et al., 2020). Women entrepreneurs should familiarize themselves with regulatory frameworks that impact their businesses. The significant positive relationship between regulatory environment and performance highlights the importance of understanding and navigating regulatory systems effectively. Women should seek information about supportive policies and regulatory provisions that can benefit their businesses. The positive impact of cultural and social factors suggests that women entrepreneurs should leverage cultural assets in their business strategies. They can build on positive cultural elements while developing strategies to navigate potential cultural barriers. Additionally, they should actively participate in initiatives that challenge limiting gender stereotypes and promote women's entrepreneurship. Finally, women entrepreneurs should embrace innovation and knowledge sharing. The study confirms that innovation significantly improves business performance. Women should actively seek opportunities for knowledge acquisition, collaborate with other

entrepreneurs, and explore innovative approaches to business challenges to enhance their competitive advantage in the marketplace.

7.3.5 Practical Implications for Non-Governmental Organizations

This study offers significant insights for NGOs working to support women entrepreneurs in Ghana. First, NGOs should reconsider traditional education-focused interventions, as formal education alone showed a negative and insignificant effect on women's entrepreneurial performance (Bird and Brush, 2020). Instead, organizations should develop practical skill-building programs that emphasize hands-on business management training, tailored mentorship initiatives, and experiential learning opportunities that address the specific challenges women entrepreneurs face in the Ghanaian context. NGOs should prioritize improving women entrepreneurs' access to quality infrastructure and resources. While infrastructure showed a positive but insignificant effect, NGOs can make meaningful impact by facilitating access to reliable transportation, affordable workspaces, technology, and capital. Organizations should design programs that not only provide resources but also teach women entrepreneurs how to effectively utilize these resources for maximum business benefit (Aldrich & Fiol, 1994). The finding that networking had a negative but insignificant impact challenges NGOs to redesign their networking initiatives. Rather than organizing generic networking events, organizations should create purposeful, diverse, and inclusive networking opportunities that deliver tangible value to women entrepreneurs. NGOs should facilitate connections with influential mentors, industry leaders, and potential investors who can provide meaningful support, knowledge, and market access (Goss, 2015). NGOs should advocate for regulatory reforms that support women's entrepreneurship. The positive and significant relationship between regulatory environment and performance indicates that

NGOs can create substantial impact by helping women navigate complex regulatory frameworks and advocating for gender-responsive policies. Organizations should establish programs that educate women entrepreneurs about relevant regulations and provide guidance on compliance (Welter & Smallbone, 2011). Finally, NGOs should promote innovation and knowledge sharing among women entrepreneurs. The positive and significant impact of innovation on performance suggests that NGOs should create platforms for women entrepreneurs to access cutting-edge business knowledge, technologies, and best practices. Organizations should establish innovation hubs, knowledge-sharing forums, and collaborative spaces where women entrepreneurs can exchange ideas, learn from each other, and develop innovative business solutions (Autio et al., 2014).

7.3.6 Practical Implications for Government Bodies

This study offers crucial insights for government bodies seeking to support women entrepreneurs in Ghana. Government agencies should recalibrate their education policies beyond formal academic credentials, as the study found education and training had a negative and insignificant effect on women's entrepreneurial performance (Bird and Brush, 2020). Instead, government bodies should invest in entrepreneurship-focused curricula that develop practical business skills, financial literacy, and market understanding among women entrepreneurs. The finding that infrastructure and resources had a positive but insignificant effect highlights the need for governments to enhance both the quality and accessibility of infrastructure. Government bodies should prioritize developing reliable transportation networks, stable utilities, affordable workspaces, and technology hubs specifically designed to meet women entrepreneurs' needs (Aldrich & Fiol, 1994). Particular attention should be paid to rural areas where infrastructure challenges may be more pronounced. The negative but insignificant impact of networking requires governments to move beyond facilitating generic business networks. Government agencies should establish structured mentorship

programs, industry-specific networking platforms, and public-private partnerships that create meaningful connections for women entrepreneurs. These initiatives should specifically target barriers women face in male-dominated business networks (Goss, 2015; Kianto & Waajakoski, 2010).

The positive and significant relationship between regulatory environment and performance underscores the importance of gender-responsive regulatory frameworks. Governments should implement reforms that simplify business registration, reduce compliance costs, create tax incentives for women-owned businesses, and ensure equal access to government procurement opportunities (Bruton et al., 2010). Regulatory impact assessments should specifically analyze how policies affect women entrepreneurs. Governments should address cultural barriers through public awareness campaigns, recognition programs for successful women entrepreneurs, and initiatives that challenge gender stereotypes in business. The positive impact of cultural factors indicates that government-led efforts to promote supportive cultural norms can significantly enhance women's entrepreneurial success (Gupta et al., 2020). Finally, government bodies should establish innovation centers, provide research and development grants, and create knowledge transfer programs specifically targeting women entrepreneurs. The significant positive impact of innovation highlights the importance of government support for women's participation in innovation ecosystems (Autio et al., 2014).

7.4 Conclusions

The findings of the study challenged conventional assumptions and have shed light on the multifaceted nature of women's entrepreneurial experiences in Ghana. The first objective was examined through 12 hypotheses, while the second was analyzed using 2. Based on the findings of the study, the following conclusions are drawn.

The study emphasizes the importance of access to finance for women entrepreneurs in Ghana. Although the findings indicate that access to finance does not have a significant effect on women entrepreneurs' market and operational performance, it remains a critical aspect of the entrepreneurial ecosystem. Finding on education and training suggests that formal education alone does not guarantee entrepreneurial success hence, there is the need to prioritize practical skills development and tailored training programs that equip women with the necessary business management skills and foster an entrepreneurial mindset. Inclusive educational opportunities should be created to cater to women entrepreneurs from diverse educational backgrounds.

It could be concluded that the availability of infrastructure and resources are important, yet, their mere presence does not significantly influence women's entrepreneurial success. It is thus concluded that the focus should be on improving the quality and accessibility of infrastructure and resources, to be reliable (e.g. transportation), accessibility (to utilities), and affordability (e.g. workspaces) to enhance women entrepreneurs' ability to effectively utilize and leverage available resources for their business growth.

Furthermore, it can be stated that networking and social capital finding challenges the assumption that networking alone leads to entrepreneurial success. It can be concluded that inclusive and diverse networking opportunities that provide tangible value to women entrepreneurs should be fostered. Hence, mentorship programs, knowledge exchange platforms, and collaborations between women entrepreneurs and other stakeholders should be encouraged to enhance women's access to resources, knowledge, and support systems.

The positive and significant relationship between the regulatory environment and women entrepreneurs' performance requires a supportive regulatory framework for women's entrepreneurial success. Policy regulatory reforms should address the specific challenges

faced by women entrepreneurs, such as simplifying bureaucratic procedures, reducing barriers to entry, and ensuring gender-responsive policies. Hence creating a favorable regulatory environment can remove obstacles and create an enabling ecosystem for women entrepreneurs.

Lastly, the cultural and social factors emphasized the importance of fostering a supportive cultural environment that values and promotes women's entrepreneurship. Hence, initiatives that challenge gender stereotypes, celebrate successful women entrepreneurs, and promote gender equality enhance the creation of a culture that recognizes and supports women's entrepreneurial endeavors, as well as empower women to overcome societal barriers and achieve their full potential.

To conclude it can be stated that the study's findings provide valuable insights into the complex interplay of various factors influencing women's entrepreneurial experiences in Ghana. Hence, the adoption of a holistic approach to addresses access to finance, practical skills development, infrastructure and resource accessibility, meaningful networking opportunities, a supportive regulatory environment, and a culture that values women's entrepreneurship. The implementation of policies and interventions based on these findings, can create an enabling ecosystem that fosters women's entrepreneurial success and drives inclusive economic growth in Ghana.

7.5 Recommendations of the study

Recommendation 1: ESO and education institutions must invest in practical engaging women entrepreneurs if they are to develop and upskill them.

Recommendation 2: Government and private sector stakeholders must prioritize infrastructure development, including transportation, utilities, affordable workspaces, and access to credit facilities for women entrepreneurs.

Recommendation 3: Business support organizations and industry associations must create and facilitate inclusive networking opportunities through mentorship programs, knowledge exchange forums, and targeted networking events for women entrepreneurs.

Recommendation 4: Policy makers and regulatory bodies must implement gender-responsive reforms to simplify bureaucratic procedures, reduce entry barriers, and ensure policies that facilitate women-owned business development.

Recommendation 5: Educational institutions and advocacy groups must implement awareness campaigns and educational initiatives that challenge discriminatory norms and promote gender equality in entrepreneurship.

Recommendation 6: Government agencies, private sector organizations, and civil society groups must establish formal partnerships to create a robust support ecosystem for women entrepreneurs.

Recommendation 7: Industry stakeholders and educational institutions must establish innovation hubs and knowledge-sharing platforms that provide access to training programs, workshops, and industry events for women entrepreneurs.

Recommendation 8: Policy makers and relevant stakeholders must review, design, develop and implement an integrated harmonized approach that addresses all aspects of women entrepreneurship support.

7.6 Limitations of the study

The study, like any other research work, has limitations. The study was a cross-sectional research work, limited to the women entrepreneurs operating in the Greater Accra Region of Ghana only. The limitation on the study means that the findings of the study should be discussed and generalized in context and with areas with similar characteristics as the study populations.

7.7 Recommendations for future studies

Based on the findings of this study and the limitations inherent in the research, several topics and recommendations are proposed for future exploration. These suggestions aim to expand the understanding of women's entrepreneurship and provide valuable insights for policy makers and researchers.

By conducting a comparative analysis of women entrepreneurs and their entrepreneurial performance in developed and developing economies would offer a broader perspective on the factors influencing women's entrepreneurial success. By examining the similarities and differences in the entrepreneurial ecosystems of various countries, researchers can identify best practices and develop targeted interventions that address the unique challenges faced by women entrepreneurs in different contexts. Also, assessing the effectiveness and sustainability of policy initiatives in promoting women's entrepreneurial drive in emerging economies is crucial. While governments and policy makers implement various programs and policies to support women entrepreneurs, evaluating the long-term impact and sustainability of these initiatives is essential. Future research should focus on analyzing the outcomes of existing policies, identifying gaps, and proposing improvements to ensure the continuous growth and success of women-owned businesses.

Also, understanding the opportunities and challenges of digital platforms for the entrepreneurial performance of women in emerging economies is a timely and relevant topic.

With the rapid advancement of technology and the increasing adoption of digital platforms, women entrepreneurs have new avenues to start and grow their businesses. However, they may also face unique challenges in accessing and leveraging these digital tools effectively. Future research should explore the impact of digital platforms on women's entrepreneurial performance, identify the barriers to adoption, and propose strategies to bridge the digital divide and empower women entrepreneurs in the digital era. In addition to these specific topics, future research should also consider employing diverse methodological approaches to gain a more comprehensive understanding of women's entrepreneurship. Qualitative studies, such as in-depth interviews and case studies, can provide rich insights into the lived experiences and challenges of women entrepreneurs. Longitudinal studies can shed light on the long-term impact of various factors on women's entrepreneurial performance and help identify trends and patterns over time. Furthermore, future research should strive to include a larger and more diverse sample of women entrepreneurs, considering factors such as age, education, industry, and geographic location. This will enable researchers to capture the heterogeneity of women's entrepreneurial experiences and develop more nuanced and context-specific recommendations.

In conclusion, the findings of this study provide a foundation for future research on women's entrepreneurship in emerging economies. By exploring comparative analyses, assessing policy initiatives, understanding the impact of digital platforms, and employing diverse methodological approaches, researchers can contribute to the development of a more comprehensive understanding of women's entrepreneurial experiences. Through collaborative efforts and evidence-based interventions, policy makers and practitioners can create an enabling environment that empowers women entrepreneurs to thrive and contribute to inclusive economic growth and development.

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Appendix 1: Questionnaire

RHODES UNIVERSITY
RHODES BUSINESS SCHOOL

FACULTY OF COMMERCE
RESEARCH QUESTIONNAIRE

Introduction

My name is Irene Akuamoah Boateng, a PhD Candidate in the Rhodes Business School, faculty of Commerce. I am conducting a study on *"The Impact of Ghana's Entrepreneurial Ecosystem on Women's Entrepreneurial Performance: The moderating role of Entrepreneurial Identity"*. I would be most grateful if you could spend a few minutes of your time to respond to this questionnaire as a way of gathering enough data for further analysis. Your input is very important, and I assure you that the information you provide will be held strictly confidential.

Please indicate your acceptance to participate in the study by indicating your initials below.

.....

Thank you.

Contact Details

Phone: 0249779803

DEMOGRAPHIC DETAILS

For each of the demographic details, kindly tick, circle or underline the option that relates to you

1. What is your Age in years?

- (a) 18-25 years (b) 25-35 years (c) 36-45 years (d) 46-55 years (e) 56 years and above

2. What is your highest level of education?

- (e) No formal education (b) Basic /Primary Education (c) Secondary school Education (d) Vocational Education (e) Higher National Diploma (f) Bachelor's Degree (g) Master's Degree (h) PhD (i) Other (please specify)

3. What is your marital status?

- (a) Single and never married (b) Married (c) Divorced (d) Separated (e) cohabitating (f) widowed (g) Single with child (ren)

4. What is your number of dependents?

- (a) No dependent (b) 1-2 dependents (c) 3-4 dependents (d) 5-7 dependents (e) 8-10 dependents (f) above 10 dependents

5. What is your current sector or industry?

(a) Retail (b) Agriculture (c) manufacturing (d) wholesale (e) services (f) technology (g) Other (please specify)

6. What is the size of your business in terms of employees?

(a) Micro (1-5 employees) (b) small (6-20 employees) (c) medium (21-100 employees) (d) Other (please specify)

7. What is your experience in years of being an entrepreneur?

(a) Less than 1 year (b) 1-3 years (c) 4-6 years (d) 7-10 years (e) 10+ years

8. What is your prior work experience?

(a) First-time entrepreneur (b) previously worked in same industry (c) no prior industry experience

9. What was your motivation of going into entrepreneurship?

(a) Opportunity-driven (b) necessity-driven (c) work-life balance (d) passion for business idea (e) Other (please specify)

10. What are your growth intentions?

(a) Content staying small (b) planning high growth and expansion (c) Other (please specify)

Section B: Entrepreneurial Ecosystem

Using the scale of 1=strongly disagree to 5=strongly agree, kindly rate your agreement to the following questions

	Access to Finance for Women Entrepreneurs	1	2	3	4	5
1	I have sufficient access to financial resources to start my business.					
2	I am able to obtain business financing from banks and other financial institutions.					
3	Microfinance institutions provide loans that meet my business needs.					
4	Government small business financing programs are available to me.					
5	I have access to angel investors and venture capital.					
6	Crowdfunding platforms allow me to raise funds for my business.					
7	I have personal resources I can invest in my business.					

	Education and Training of Women Entrepreneurs	1	2	3	4	5
1	Entrepreneurship education programs are available to me.					
2	I have access to business management training.					
3	Mentorship opportunities exist to provide me guidance.					
4	There are networking events for me to develop professional relationships.					
5	I have access to online education platforms for skills development.					
6	University entrepreneurship centers provide support for my business.					
7	Incubators and accelerators assist me with training and resources.					

	Infrastructure and Resources	1	2	3	4	5
1	My community has co-working spaces, incubators and accelerators to support my business.					
2	There is reliable electricity and telecommunications infrastructure where I operate.					
3	I have access to transportation infrastructure to distribute and sell my products/services.					
4	Government programs exist to help me access equipment, technology and facilities.					
5	Affordable real estate options are available for my business operations.					
6	I can readily access raw materials, inventory and other inputs.					
7	Support services like legal, accounting, IT and marketing help are available.					

	Networking and Social Capital	1	2	3	4	5
1	There are strong women's business associations and networks.					
2	I have a network of fellow entrepreneurs for advice and collaboration.					
3	Mentors are available through professional associations and non-profits.					
4	Female role models and success stories inspire and guide me.					
5	My friends and family provide connections and referrals.					
6	I have access to business networks beyond my immediate contacts.					
7	Male business leaders support and promote women entrepreneurs.					

	Regulatory Environment	1	2	3	4	5
1	Government policies encourage and support women's entrepreneurship.					
2	The legal process for registering and licensing a business is straightforward.					
3	Labor regulations are favourable for me to hire employees.					
4	I can access government contracts and procurement opportunities.					
5	Intellectual property regulations protect my innovations and ideas.					
6	Tax incentives and exemptions provide benefits for my small business.					
7	Government programs provide regulatory compliance support.					

	Cultural Environment	1	2	3	4	5
1	My culture encourages and celebrates women entrepreneurs.					
2	Families support women starting and running businesses.					
3	Successful businesswomen are portrayed positively in the media.					
4	Women helping other women succeed is part of our culture.					
5	Investors have confidence in and provide capital to women-led ventures.					
6	Customers are receptive to buying products/services from women-owned businesses.					

7	Male business leaders recognize the talents and skills of women entrepreneurs.					
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	Innovation	1	2	3	4	5
1	I actively seek new ideas and opportunities for innovation.					
2	I have introduced new products, services or processes to differentiate my business.					
3	I incorporate new technologies to enhance my offerings and operations.					
4	I have made innovations focused on social and environmental benefits.					
5	I regularly implement small experiments and prototypes to test new concepts.					
6	I collaborate with partners, universities and researchers to access innovations.					
7	I have received patents, grants or other support to develop innovations.					

SECTION C: Entrepreneurial performance

Using the scale of 1=strongly disagree to 5=strongly agree, kindly rate your level of agreement to the following questions

	Market Performance	1	2	3	4	5
1	My products/services meet a well-defined market need.					
2	My marketing is effective in reaching and attracting new customers.					
3	My market share has grown over the past 3 years.					
4	My customer retention and loyalty are high.					
5	My customers are satisfied with the value they receive from my products/services.					
6	My products/services command premium pricing in their market.					
7	I have expanded my customer base into new market segments and regions.					

	Operational Performance	1	2	3	4	5
1	I have achieved consistent revenue and profit growth.					
2	My costs are well-controlled.					
3	I have an effective management team in place.					
4	My operations processes are efficient and productive.					
5	I have successfully implemented information systems for managing my business.					
6	I have clear strategies and plans to guide my business growth.					
7	I have effective quality control processes.					

SECTION D: Entrepreneurial performance

Using the scale of 1=strongly disagree to 5=strongly agree, kindly rate your level of agreement to the following questions

	Entrepreneurial Identity-individual	1	2	3	4	5
1	“I often think about becoming an entrepreneur,”					
2	“I would like to see myself as an entrepreneur,”					
3	“Becoming an entrepreneur is an important part of who I am,”					
4	“When I think about it, the term ‘entrepreneur’ would fit me pretty well,”					
5	“I am always thinking about becoming an entrepreneur,”					
6	“It is important for me to express my entrepreneurial aspirations.”					

	Entrepreneurial Identity-venture antecedents	1	2	3	4	5
1	I have good access to social networks of other entrepreneurs in my local area.					
2	There is a lot of industry knowledge available in my local environment.					
3	I have good access to advice and mentoring from experienced local entrepreneurs.					
4	I would have good access to financing for a potential new business venture in my local area.					
5	There are many small businesses prevalent in my local community.					

	Entrepreneurial Identity-socio-cultural	1	2	3	4	5
1	Entrepreneurship is respected as a career choice in my society.					
2	Business failures are tolerated and not stigmatized in my community.					
3	There are role models and success stories of local entrepreneurs.					
4	Support programs make entrepreneurship accessible to varied demographics.					
5	Entrepreneurship outcomes can provide positive social outcomes.					

Thank you for your time.

Appendix 2: Papers submitted for publication

1. **International Entrepreneurship and Management Journal** - The canonical correlational analysis between women entrepreneurial identity and women entrepreneurial performance in Ghana.
2. **International Entrepreneurship and Management Journal** - The Impact Of Ghana's Entrepreneurial Ecosystem On Women's Entrepreneurial Performance: The Moderating Role Of Entrepreneurial Identity.