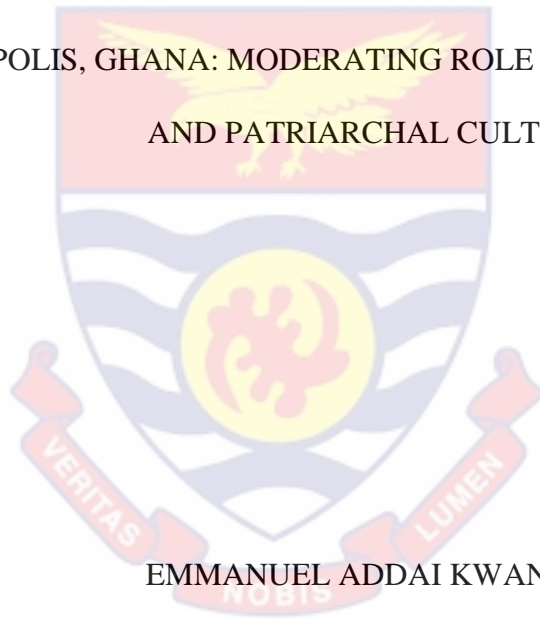


UNIVERSITY OF CAPE COAST

FINANCIAL LITERACY, FINANCIAL INCLUSION AND ECONOMIC  
EMPOWERMENT OF WOMEN MICRO-ENTREPRENEURS IN ACCRA  
METROPOLIS, GHANA: MODERATING ROLE OF SOCIAL NETWORK  
AND PATRIARCHAL CULTURE



EMMANUEL ADDAI KWANING

2023

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University of Cape Coast



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METROPOLIS, GHANA: MODERATING ROLE OF SOCIAL NETWORK  
AND PATRIARCHAL CULTURE

BY

EMMANUEL ADDAI KWANING

Thesis submitted to the Department of Finance of the School of Business,  
College of Humanities and Legal Studies, University of Cape Coast, in partial  
fulfilment of the requirements for the award of Doctor of Philosophy degree in  
Business Administration

OCTOBER 2023

## DECLARATION

### Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature ..... Date.....

Name: Emmanuel Addai Kwaning

### Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised per the guidelines on supervision of thesis laid down by the University of Cape Coast

Principal Supervisor's Signature..... Date .....

Name: Prof. Samuel Kwaku Agyei

Co-Supervisor's Signature..... Date.....

Name: Prof. Anokye Mohammed Adam

## ABSTRACT

This study scrutinises the effect of financial literacy and financial inclusion on the economic empowerment of women micro-entrepreneurs in Ghana. It also examined the moderating role of social networks as well as patriarchal culture on women micro-entrepreneurs' economic empowerment. The investigation utilized positivist philosophy, quantitative approach, cross-sectional study design and explanatory research design. Structured questionnaires were administered to a sample of 480 women micro-entrepreneurs from three sub-metros of Accra Metropolis, Ghana. The data was analysed utilizing the PLS-SEM (version 4) algorithm for inferential statistics. The outcomes of the investigation discovered that financial literacy positively influenced the economic empowerment of women micro-entrepreneurs. Also, social networks positively moderated the connection amid financial awareness as well as economic empowerment. Again, social networks positively moderated the relationship between usage and economic empowerment. Financial inclusion significantly and positively influenced the economic empowerment of women micro-entrepreneurs. Patriarchal culture negatively moderated the relationship between usage and economic empowerment. However, patriarchal culture did not significantly moderate the relationship between financial literacy and economic empowerment. The study recommended that policy makers intensify financial literacy, financial inclusion and social network programmes. Also, women's advocacy groups should sensitise the populace on the negative effects of some patriarchal cultures on women micro-entrepreneurs in Ghana.

## KEY WORDS

Control and decision-making power

Economic empowerment

Financial attitude

Financial awareness

Financial behaviour

Financial inclusion

Financial knowledge

Financial Literacy

Financial skills

Financial well-being

Patriarchal culture

Social network

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## DEDICATION

To my wife, Mrs Beatrice Addai Kwaning and my children, Prince Paul Addai

Kwaning, Princess Gregoria Addai Kwaning and Andy Charles Addai

Kwaning.



**TABLE OF CONTENT**

	Page
DECLARATION	ii
ABSTRACT	iii
KEY WORDS	iv
ACKNOWLEDGEMENT	v
DEDICATION	vi
TABLE OF CONTENT	vii
LIST OF TABLES	xvi
LIST OF FIGURES	xxiii
LIST OF ACRONYMS	xxiv
CHAPTER ONE: INTRODUCTION	
Introduction	1
Background to the Study	2
Statement of the problem	8
Purpose of the Study	12
Research Objectives	12
Research Hypotheses	13
Significance of the Study	17
Delimitation of the Study	18
Limitations of the Study	19
Definition of Terms	20
Organisation of the Study	21
CHAPTER TWO: LITERATURE REVIEW	
Introduction	23

Theoretical Review	23
Empowerment Theory	24
Kabeer's Three-Dimensional Model	27
Attribution Theory	29
Social Learning Theory	34
Patriarchal Theory	36
Empirical Review	38
Financial Literacy and Economic Empowerment	38
Moderating Role of Social Network	48
Moderating Role of Patriarchal Culture	52
Effect of Financial Inclusion on Economic Empowerment	57
Moderating Role of Patriarchal Culture	63
Moderating Role of Social network	68
Deduction from previous studies	70
Conceptual Framework	71
Chapter Summary	73
CHAPTER THREE: RESEARCH METHODS	
Introduction	75
Research Philosophy	75
Research Design	76
Research Approach	77
Study Area	78
Population	81
Sampling procedure	83
Data Collection Instrument	84

Operationalisation of Variables	87
Source: Author's Construct (2023)	88
Pre-testing of Instrument	89
Data Collection Procedure	90
Common Method Bias	91
Reliability and Validity	92
Data Processing and Analysis	94
Partial Least Square- Structural Equation Model (PLS-SEM)	95
Measurement Model Assessment	96
Collinearity Assessment and Structural Model Assessment	98
Ethical Consideration	99
Chapter Summary	100
<b>CHAPTER FOUR: BACKGROUND OF RESPONDENTS AND DESCRIPTIVE STATISTICS OF VARIABLES</b>	
Introduction	101
Background Characteristics of the Respondents	101
Descriptive Statistics and Normality Assessment	105
Chapter Summary	117
<b>CHAPTER FIVE: FINANCIAL LITERACY, SOCIAL NETWORK, PATRIARCHAL CULTURE AND ECONOMIC EMPOWERMENT</b>	
Introduction	118
Influence of Financial Literacy (FL) on Economic Empowerment	118
Measurement Model	118
Internal Consistency Reliability	119
Indicator Reliability	120

Convergent Validity	121
Discriminant Validity	123
Structural Model of Financial Literacy and Economic Empowerment	124
Multicollinearity Assessment	124
Path Coefficient Assessment	124
Coefficient of Determination and Predictive Relevance ( $Q^2$ )	130
Discussion of findings	132
Moderating Role of SN	138
Measurement Model Assessment	138
Internal Consistency Reliability	139
Indicator Reliability	141
Convergent Validity	141
Discriminant Validity	143
Structural Model Assessment of Moderating Role of SN in the Relationship between FL and CDMP	143
Multicollinearity Assessment	144
Hypotheses of Moderating Role of SN in the Relationship between FL and CDMP	145
Effect Size ( $f^2$ )	148
Co-efficient of Determination and Predictive Relevance	149
Moderating Role of SN in the Relationship between FL and Financial Well-being (FWB)	150
Measurement Model	151
Internal Consistency Reliability	151
Indicator Reliability	153

Convergent Validity	153
Discriminant Validity	155
Structural Model Assessment	155
Multicollinearity Assessment	156
Hypotheses of Moderating Role of SN in the Relationship between FL and FWB	156
Effect Size ( $f^2$ )	160
Co-efficient of Determination and Predictive Relevance	161
Discussion of findings	162
Moderating Role of Patriarchal Culture (PATC) in the Relationship between FL and Economic Empowerment	166
Measurement Model	167
Internal Consistency Reliability	167
Convergent Validity	168
Discriminant Validity	170
Structural Model	170
Multicollinearity Assessment	171
Hypotheses of Moderating Role PATC in the Relationship between FL and CDMP	171
Effect Size ( $f^2$ )	175
Co-efficient of Determination and Predictive Relevance	175
Moderating Role of PATC in the Relationship between FL and FWB	176
Measurement Model	177
Internal Consistency Reliability	177
Convergent Validity	178

Discriminant Validity	180
Structural Model	180
Multicollinearity Assessment	181
Hypotheses on the Moderating Role of PATC in the Relationship between FL and FWB	181
Effect size ( $f^2$ )	185
Co-efficient of Determination and Predictive Relevance	185
Discussion of findings	186
Chapter Summary	188
CHAPTER SIX: FINANCIAL INCLUSION, PATRIARCHAL CULTURE, SOCIAL NETWORK AND ECONOMIC EMPOWERMENT	
Introduction	189
Influence of Financial Inclusion (FL) on Economic Empowerment	189
Measurement Model	189
Internal Consistency Reliability	190
Indicator Reliability	191
Convergent Validity	192
Discriminant Validity	193
Structural Model	193
Multicollinearity	194
Path Coefficient Assessment	194
Coefficient of Determination and Predictive Relevance	197
Discussion of findings	199
Moderating Role of PATC	201

Examining the Moderating Role of PATC in the Relationship between FI and CDMP	202
Measurement Model Assessment	202
Internal Consistency Reliability	202
Indicator Reliability	204
Convergent Validity	204
Discriminant Validity	206
Structural Model Assessment	206
Moderating Role of PATC in the Relationship between FI and CDMP	206
Multicollinearity Assessment	207
Hypotheses of Moderating Role of PATC in the Relationship between FI and CDMP	207
Effect Size ( $f^2$ )	209
Co-efficient of Determination and Predictive Relevance	210
Examining the Moderating Role of PATC in the Relationship between FI and FWB	211
Measurement Model Assessment	211
Internal Consistency Reliability	212
Indicator Reliability	213
Convergent Validity	214
Discriminant Validity	216
Structural Model Assessment	216
Multicollinearity Assessment	217
Hypotheses of the Moderating Role of PATC in the Relationship between FI and FWB	217

Effect Size ( $f^2$ )	219
Co-efficient of Determination and Predictive Relevance	220
Discussion of findings	221
Moderating Role of SN in the Relationship between FI and Economic Empowerment	222
Examining the Moderating Role of SN in the Relationship between FI and CDMP	223
Measurement Model Assessment	223
Internal Consistency Reliability	223
Convergent Validity	224
Discriminant Validity	226
Structural Model	226
Multicollinearity Assessment	227
Hypotheses of Moderating Role of SN in the Relationship between FI and CDMP	227
Effect Size ( $f^2$ )	229
Co-efficient of Determination and Predictive Relevance	230
Examining the Moderating Role of SN in the Relationship between FI and FWB	231
Measurement Model Assessment	231
Internal Consistency Reliability	232
Convergent Validity	232
Discriminant Validity	234
Structural Model Assessment	234
Multicollinearity Assessment	235



Hypotheses of the Moderating Role of SN in the Relationship between FI and FWB	235
Effect Size ( $f^2$ )	237
Co-efficient of Determination and Predictive Relevance	238
Discussion of findings	239
Chapter Summary	241
CHAPTER SEVEN: SUMMARY, CONCLUSION AND RECOMMENDATIONS	
Introduction	243
Summary of Findings	243
Conclusion	247
Recommendations	250
Contribution to Knowledge	251
Contribution to Theory	252
Contribution to Practice	252
Suggestion for Further Research	253
REFERENCES	254
APPENDICES	289
APPENDIX A: Questionnaire	289
APPENDIX B: Ethical Clearance	295

**LIST OF TABLES**

	Page
1 Measurement and operationalisation of variables	88
2 Pre-test Scale Reliability Checks	90
3 Background of the Respondents	102
4 Descriptive and Normality Assessment for Financial Literacy	106
5 Descriptive and Normality Assessment for Financial Inclusion	110
6 Descriptive Statistics and Normality Checks for Economic Empowerment	114
7 Descriptive and Normality Assessment for Social Network	116
8 Descriptive Statistics and Normality Checks for Patriarchal Culture	117
9 Internal Consistency Reliability of the Effect of Financial Literacy (FL) on Economic Empowerment	119
10 Indicator Reliability (outer loadings) of the Effect of FL on Economic Empowerment	120
11 Average Variance Extracted (AVE) of the Effect of FL on Economic Empowerment	121
12 Heterotrait-Monotrait Ratio (HTMT) of FL and Economic Empowerment	122
13 Multicollinearity Assessment (Inner VIF) of the Effect of FL on Economic Empowerment	124
14 Path Coefficient of the Effect of Financial Literacy on Economic Empowerment	126
15 Coefficient of Determination and Predictive Relevance of FL and Economic Empowerment	130

16	Internal Consistency Reliability of the Moderating Role of SN in the connection amid FL as well as CDMP	139
17	Outer Loading of the Moderating Role of SN in the connection amid FL and CDMP	140
18	Convergent Validity of the Moderating Role of SN in the connection amid FL and CDMP	141
19	HTMT of the Moderating Role of SN in the connection amid FL and CDMP	142
20	Inner VIF of the Moderating Role of SN in the connection amid FL and CDMP	144
21	Significance of Moderating Effect of SN on the Link between FL and CDMP	145
22	Effect Size of SN on the Link between FL and CDMP	148
23	Co-efficient of Determination and Predictive Relevance of the Moderating Role of SN in the connection amid FL and CDMP	149
24	Internal Consistency Reliability of the Moderating Role of SN in the Relationship between FL and FWB	151
25	Outer Loading of the Moderating Role of SN in the connection amid FL and FWB	152
26	Average Variance Extracted (AVE) of the Moderating Role of SN in the connection amid FL and FWB	153
27	HTMT of the Moderating Role of SN in the connection amid FL and FWB	154
28	Multicollinearity Assessment (Inner VIF) of the Moderating Role of SN in the connection amid FL and FWB	156

29	Significance of Moderating Effect of SN in the Link between FL and FWB	157
30	Effect Size of SN on the Link between FL and FWB	160
31	Co-efficient of Determination and Predictive Relevance of the Moderating role of SN in the connection amid SN and FWB	161
32	Internal Consistency Reliability of the Moderating Role of PATC in the connection amid FL and CDMP	167
33	Convergent Validity of the Moderating Role of PATC in the connection amid FL and CDMP	168
34	HTMT of the Moderating Role of PATC in the connection amid FL and CDMP	169
35	Inner VIF of the Moderating Role of PATC in the connection amid FL and CDMP	171
36	Significance of Moderating Effect of Patriarchal Culture in the Link between FL and CDMP	172
37	Effect Size of PATC on the Link between FL and CDMP	175
38	Co-efficient of Determination and Predictive Relevance of the Moderating Role of PATC in the connection amid FL and CDMP	175
39	Internal Consistency Reliability of the Moderating Role of PATC in the connection amid FL and FWB	177
40	Average Variance Extracted of the Moderating Role of PATC in the connection amid FL and FWB	178
41	HTMT of the Moderating Role of PATC in the connection amid FL and FWB	179

42	Inner VIF of the Moderating Role of PATC in the connection amid FL and FWB	180
43	Significance of Moderating Effect of PATC on the Link between FL and FWB	182
44	Effect size of PATC on the Link between FL and FWB	185
45	Co-efficient of Determination and Predictive Relevance of the Moderating Role of PATC on the connection amid FL and FWB	185
46	Internal Consistency Reliability of the Relationship between Financial Inclusion (FI) and Economic Empowerment	190
47	Indicator Reliability (Outer Loadings) of the Relationship between FI and Economic Empowerment	191
48	Average Variance Extracted (AVE) of the Relationship between FI and Economic Empowerment	192
49	HTMT of the Relationship between FI and Economic Empowerment	192
50	Multicollinearity Assessment (Inner VIF) of FI and Economic Empowerment Relationship	193
51	Path Coefficient of the Relationship between Financial Inclusion and Economic Empowerment	195
52	Co-efficient of Determination and Predictive Relevance of Financial Inclusion and Economic Empowerment	197
53	Internal Consistency Reliability of the Moderating Role of PATC in the Relationship between FI and CDMF	202
54	Outer Loadings of the Moderating Role of PATC in the Relationship between FI and CDMF	203

55	Average Variance Extracted of the Moderating Role of PATC in the Relationship between FI and CDMP	204
56	HTMT of the Moderating Role of PATC in the Relationship between FI and CDMP	205
57	Inner VIF of Moderating Role of PATC in the Relationship between FI and CDMP	207
58	Significance of Moderating Effect of PC on the Link between FI and CDMP	208
59	Effect Size of PATC on the Link between FI and CDMP	209
60	Co-efficient of Determination and Predictive Relevance of the Moderating Role of PATC in the Relationship between FI and CDMP	210
61	Internal Consistency Reliability of the Moderating Role of PATC in the Relationship between FI and FWB	212
62	Outer Loadings of the Moderating Role of PATC in the Relationship between FI and FWB	213
63	Average Variance Extracted of the Moderating Role of PATC in the Relationship between FI and FWB	214
64	HTMT of the Moderating Role of PATC in the Relationship between FI and FWB	215
65	Inner VIF of Moderating Role of PATC in the Relationship between FI and FWB	216
66	Significance of Moderating Effect of PATC in the Link between FI and FWB	217
67	Effect Size of PATC on the Link between FI and FWB	219

68	Co-efficient of Determination and Predictive Relevance of the Moderating role of PATC in the Relationship between FI and FWB	220
69	Internal Consistency Reliability of Moderating Role of SN in the Relationship between FI and CDMP	223
70	Convergent Validity of Moderating Role of SN in the Relationship between FI and CDMP	224
71	HTMT of the Moderating Role of SN in the Relationship between FI and CDMP	225
72	Inner VIF of Moderating Role of SN in the Relationship between FI and CDMP	227
73	Significance of Moderating Effect of SN on the Link between FI and CDMP	228
74	Effect Size of SN on the Link between FI and CDMP	229
75	Co-efficient of Determination and Predictive Relevance of the Moderating Role of Social Networks in the Relationship between FI and CDMP	230
76	Internal Consistency of the Moderating Role of SN in the Relationship between FI and FWB	231
77	Convergent Validity of the Moderating Role of SN in the Relationship between FI and FWB	232
78	HTMT of the Moderating Role of SN in the Relationship between FI and FWB	233
79	Inner VIF of the Moderating Role of SN in the connection amid FI and FWB	234

80	Significance of Moderating Effect of SN on the Link between FI and FWB	235
81	Effect Size of SN on the Link between FI and FWB	237
82	Co-efficient of Determination and Predictive Relevance of the Moderating Role of Social Networks on the connection amid FI and FWB	238



**LIST OF FIGURES**

	Page
1 Conceptual Framework	73
2 Map of Accra Metropolis	80
3 Structural Model for financial literacy and economic empowerment	132
4 Moderating role of social network in the connection amid financial literacy and control and decision-making power	150
5 Moderating role of social network in the relationship between financial literacy and financial well-being	162
6 Moderating role of patriarchal culture in the connection amid financial literacy and control and decision- making power	176
7 Moderating role of patriarchal culture in the relationship between financial literacy and financial well-being	186
8 Structural Model for financial inclusion and economic empowerment	198
9 Moderating role of patriarchal culture in the connection amid financial inclusion and control and decision-making power	211
10 Moderating role of patriarchal culture in the relationship between financial inclusion and financial well-being.	220
11 Moderating role of social network in the connection amid financial inclusion and control and decision-making power	231
12 Moderating role of social network on the relationship between financial inclusion and financial well-being	239

**LIST OF ACRONYMS**

ACC	Access
CDMP	Control and Decision-making Power
CMB	Common Method Bias
FAT	Financial Attitude
FAW	Financial Awareness
FBH	Financial Behaviour
FI	Financial Inclusion
FKN	Financial Knowledge
FL	Financial Literacy
FSK	Financial Skills
FWB	Financial Well-being
GEA	Ghana Enterprises Agency
GWES	Ghana Women Entrepreneurship Summit
MSMEs	Micro Small and Medium Enterprises
NBSSI	National Board for Small-Scale Industries
PATC	Patriarchal Culture
PLS-SEM	Partial Least Square-Structural Equation Model
QUAL	Quality
SDGs	Sustainable Development Goals
SEM	Structural Equation Modelling
SN	Social Network
USA	Usage
WMEs	Women Micro-Entrepreneurs

## CHAPTER ONE

### INTRODUCTION

#### Introduction

Economic empowerment of women entrepreneurs is so important in reducing poverty and gender inequality and enhancing inclusive growth worldwide (Kabeer, 2021). It has attracted attention among academia and development agencies in recent years, culminating in their inclusion in the Sustainable Development Goals (SDGs) as enshrined in the fifth goal (Gender equality) and the first goal (poverty reduction). Notably, among women entrepreneurs whose economic empowerment is crucial are women micro-entrepreneurs (Lindvert et al., 2017).

Notwithstanding the contribution of women micro-entrepreneurs to employment and economic advancement in Ghana, they face challenges, including a lack of financial, human as well as social resources in the form of financial literacy, financial inclusion and social networks (Boateng, 2020). In addition, patriarchal culture affects women micro-entrepreneurs' decision-making power and empowerment. Existing studies on financial literacy, financial inclusion, and economic empowerment abound in the empirical literature. However, there exists a dearth of empirical studies on the effects of financial literacy and financial inclusion on economic empowerment while considering the moderating roles of social networks and patriarchal practices. The current investigation adds to prior literature by focusing on the effects of financial literacy and financial inclusion on economic empowerment as well as the moderating roles of social networks and patriarchal practices of women micro-entrepreneurs.

## Background to the Study

In recent times, women's economic empowerment has attracted much importance and recognition and dominated global talks, particularly in developing and middle-income countries. Empowering women leads to gender equality, sound women's financial well-being and inclusive growth (Khan & Suriseti, 2022; Kumari et al., 2020; Bhatia & Singh, 2019). The first prime minister of India, Jawahar Lal Nehru, said in 2012, "When a woman moves forward, the family moves, the village moves, and the nation moves". In this regard, the United Nations (UN) outlined the SDGs Programme 2030 to include the economic empowerment of women as enshrined in the fifth goal (gender equality) and the first goal (poverty reduction).

In addressing the importance of women's economic empowerment, policymakers, governments and agencies in numerous countries have recently undertaken the needed interventions (Bhatia & Singh, 2019). The countries include India, Ghana, Indonesia, Pakistan, Brazil and Nigeria, to mention a few. In India, for example, the government, in 2014, launched a financial inclusion intervention programme dubbed 'PMJDY' to empower women in general (Bhatia & Singh, 2019), resulting in widening financial inclusion among women. In Ghana, successive governments introduced women's economic empowerment interventions, with the recent one being the Ghana Women Entrepreneurship Summit (GWES) undertaken by the Ghana Enterprises Agency (GEA), in 2022.

According to Dietz et al. (2018) a woman is economically empowered when she has the ability to succeed in economic ventures and control decisions concerning her life choices (Golla et al., 2011). The woman micro

entrepreneur is economically empowered when she has the power to make decisions that affect her life. However, empowerment is context and population-specific; thus, what empowers some people may not be needed in empowering others (Zimmerman, 2000). Therefore, there is a need to consider the context under which one is applying the construct of empowerment to use the appropriate measurement to conceptualize it. This study conceptualises economic empowerment using the financial well-being, control, and decision-making power of women micro-entrepreneurs.

Micro-enterprise is defined differently, with most researchers using the number of employees (Tambunan, 2019). In Ghana, the Ghana Enterprises Agency (GEA), defined micro-enterprise as an enterprise employing between 1 and 5 employees. This implies that women micro-entrepreneurs form part of businesses with at most 5 workers. Women micro-entrepreneurs in Accra Metropolis are engaged in a range of activities, including trading, hairdressing, sewing, catering services and fish mongering (Afenyo-Agbe et al., 2021).

In Ghana, women constitute a larger proportion of micro, small and medium businesses, and most of them are in micro-enterprises (Agyei, 2018). In developing countries, women micro-entrepreneurs are more than their men equivalents and contribute significantly to employment and economic growth (Seshie-Nasser & Oduro, 2018). According to the Ghana Integrated Business Establishment Survey (2016), micro-enterprises comprise more than half of MSMEs.

Women's economic empowerment has some antecedents, including resources such as financial literacy and financial inclusion (Kumari, 2020). These resources are enshrined in Kabeer's (1999) three-dimensional model of

economic empowerment (resources, agency and achievement). As averred by Remund (2010), financial literacy helps people to manage their funds by making sound financial decisions while staying alert to changes in the business environment.

It involves awareness, attitude, knowledge, skills and behaviour about financial concepts and terms that enable the individual to come out with quality business decisions. Financial literacy allows entrepreneurs to allocate resources properly, manage their businesses effectively and make prudent investments, thereby enhancing the growth of their businesses (Agyei et al., 2019). Women with a strong understanding of money management control their household finances better and contribute to household decision-making (Sabri et al., 2020).

Empowerment theory, supported by Kabeer's (1999) three-dimensional model, links financial literacy and economic empowerment. The theory posits that some disadvantaged and vulnerable individuals are deprived of resources, and acquiring these necessary resources puts them in a better position to have choices in life that empower them economically (Zimmerman, 2000). When women micro-entrepreneurs are equipped with financial literacy, they become knowledgeable in financial matters such as budgeting, savings and investment. This helps them to manage their businesses well (Adam et al., 2017).

In other words, when women micro-entrepreneurs are financially literate, they can access, own and control resources prudently (Karimli et al., 2021). Financial literacy provides a person with the financial management skills required to successfully manage a business and investment and ultimately achieve the necessary growth (Lusardi, 2019; Agyei et al., 2019).

Again, a financially literate business owner is capable of making sound financial decisions regarding financial planning, sourcing and utilisation of funds (Agyei et al., 2019).

Similarly, financial literacy contributes to women's decision-making (Khan & Surisetti, 2022; Xue, 2019; Zimmeman, 2000). If a woman micro-entrepreneur knows about financial matters, she can make financial decisions and control her household income and expenditure (Kumari et al., 2020). One can acquire financial literacy and improve decision-making skills by learning individually or through social networks. In this vein, social learning theory also links financial literacy and decision-making through social networks. The theory proposes that individuals learn by observing and imitating themselves.

It can be deduced from social learning theory that women micro-entrepreneurs are likely to imitate the financial behaviour of other women micro-entrepreneurs, which consequently impacts their control and decision-making as well as financial well-being. However, the nature of the empirical connection between financial literacy and economic empowerment of women micro-entrepreneurs has not been examined in Ghana. The outcome holds serious implications for strategies to enhance the well-being of micro-entrepreneurs; hence, there is a need to examine the impact this lacuna in Ghana.

Despite the pertinent role of financial literacy in enhancing economic empowerment, financial inclusion could also influence it (Bongomin et al., 2018; Barik et al., 2022). Besides sound financial well-being, when women micro-entrepreneurs use financial services, they become more knowledgeable

in financial matters, thereby enhancing their contribution to decision-making power in the household and businesses (Hendricks, 2019; Ouma et al., 2017).

Usage, access and quality are dimensions of financial inclusion (Tram et al., 2021). It has been proven that when women micro-entrepreneurs have access to and use funds, they can contribute to household decision-making (AL-Shami et al., 2017). Kabeer's Three-Dimensional Model posited that empowerment is a process encompassing resources, agency and achievement, including access to funds or microcredit (Alao et al., 2022). Thus, a woman micro entrepreneur's knowledge of financial issues improves her financial well-being and decision-making.

Attribution theory by Heider (1958) corroborates Kabeer's Three-Dimensional Model to explain the connection among the variables. According to Heider (1958), there is always a reason why events happen, how people behave, why some people succeed and others fail and the consequence thereof. This implies that the financial well-being and decision-making power of women micro-entrepreneurs have causes that emanate from many sources, including financial inclusion and financial literacy (Kumari et al., 2019; Salia et al., 2018).

Nonetheless, the application of Kabeer's (1999) three-dimensional model of economic empowerment to empower society often fails due to social and cultural interaction as routed in social learning theory (Bandura, 1977) and social network theory (Burt, 1983). Regarding economic empowerment, key possible plausible enablers are social networks and patriarchal culture, especially in Ghana. However, the influence of social networks and patriarchal culture in the three-dimensional model is non-existent in the literature.



Therefore, it is essential to consider all these variables in women micro-entrepreneurs' economic empowerment.

Social network describes the interrelationships between individuals, families, household and communities, either formal or informal and their influence on how they behave. Networking aids women in overcoming barriers to entrepreneurship by supporting them in acquiring access to resources, financial information, and financing and recognising prospective business possibilities (Jha & Alam, 2022; Abbott & Fuller-Love, 2020; Kamberidou, 2013). The extant literature suggests that women micro-entrepreneurs with wider social networks can make quality decision about their finances (Dzogbenuku et al., 2022; Mavlutova et al., 2021; Ekpe et al., 2015). However, the possible impact of social networks in the above relationships has not been well investigated in Ghana.

Related to social networks, one other key suppressor of women's empowerment in developing countries is the patriarchal culture promoting male supremacy (Odok, 2020; Mudau & Obadire, 2017). Patriarchal culture tends to limit the benefit of policy interventions towards women micro-entrepreneurs. The moderating impact of patriarchal culture in the connection amid financial inclusion as well as economic empowerment sits well with patriarchal theory. Where patriarchal culture is pervasive, women micro-entrepreneurs' control is suppressed. Under this patriarchal culture, right from their childhood, women are made to understand that they are responsible for household chores. Again, their mobility is also restricted. However, in a liberal patriarchal culture, all these practices are limited.

It can be examined that the empirical literature is silent on the effects of financial literacy and financial inclusion on the empowerment of women micro-entrepreneurs in Ghana despite the plethora of existing studies (Adom et al., 2018; Boateng, 2020; Quagraine et al., 2021; Agyei et al., 2019; Agyei, 2018; Adam, Frimpong & Boadu, 2017; Adam, 2017; Huston 2010, Lusardi, 2019; Kumari et al., 2020; Agyapong & Attram, 2019). Likewise, the extent to which social networks and patriarchal culture could moderate the nexus is entirely missing from the empirical literature, even though theoretical support exists. The current thesis deepens our knowledge on the effects of financial literacy and financial inclusion on the empowerment of women micro-entrepreneurs. It further examines the moderating roles of social networks and patriarchal culture.

### **Statement of the problem**

Ghana Living Standard Survey Round 7 reports that women constitute a larger proportion of economically active persons and are dominant among the employed. Again, Ghana 2022 Earning Inequality in the Public Sector reports that males constitute a larger proportion of public sector workers. This implies that women's employment is dominated in the private and informal sectors. This is corroborated by Ministry of Trade and Industry (2019) and GSS IBES (2016) that women dominate in Micro, Small and Medium Enterprise (MSME) ecosystems, particularly in the micro-enterprise sector in Ghana, with over 80% which create over 30% of all jobs (Quagraine et al., 2020). According to Ministry of Trade and Industry (2019), micro women entrepreneurs constitute a larger proportion of MSMEs in Ghana. The SDGs 1 and 5 aim at empowering women through poverty alleviation and gender

equality. Economic empowerment promotes poverty alleviation and gender equality particularly among the deprived, such as women micro entrepreneurs (Rui & Nie, 2021; Altan-Olcay, 2016; Hackl, 2018).

However, women micro-entrepreneurs are bedevilled with several challenges, particularly, lack of empowerment affecting their control, decision-making and financial well-being (Boateng & Poku, 2019). These entrepreneurs suffer from economic marginalisation, often greater and harder to overcome than their male counterparts, which calls for equality and economic empowerment (Pal et al., 2022; Casteleiro & Mendes, 2022). Interventions such as financial literacy and access to finance remain a challenge to their empowerment. As stated by Roy and Jain (2018) and Boateng (2020) women have a relatively low level of financial knowledge. In Accra metropolis for instance, women micro-entrepreneurs have low financial literacy in budgeting, investment diversification, interest rate and insurance (Afenyo-Agbe et al., 2021). This problem has been aggravated by the collapse of many micro finance institutions in 2019, due to inability of women micro-entrepreneurs having access to microcredit (Steel et al., 2021).

Empowerment theory and Kabeer three-dimensional model require availability of resources for women micro-entrepreneurs (Kabeer, 2021). But these women micro-entrepreneurs lack the resources to empower them. In addition to the financial literacy as well as access to adequate financial services, their economic empowerment is affected by their roles and responsibilities in the family (Mensah & Derera 2023). Compounding this problem is women's responsibility for household chores that consume part of their time for business activities. Thus, patriarchal practices and household

responsibilities contribute to barriers to the economic empowerment of women owners of enterprises in Ghana (Gyan et al., 2020). The problems with negative patriarchal practices in Ghana have resulted in most women in Ghana running micro-enterprises without expansion (Boateng, 2020). Patriarchal practices are more pronounced in families where women are not economically advanced (Sultan, 2010). In such instances, women will be restricted to controlling their personal and household income (Amugsi et al., 2016; Kimbu et al., 2019)

Attribution theory demonstrates that failure or success can be attributed to a cause and as a result, the failure of women micro entrepreneurs to achieve economic empowerment can be attributed to many factors. Accordingly, Pal et al. (2022) noted that, despite the contribution of women entrepreneurs, their economic empowerment is hindered due to impediments such as inadequate financial literacy and insufficient funds. All these problems impact negatively on women micro-entrepreneurs' ability to contribute to household income as well as their standard of living.

Studies on financial literacy are extant. However, most of these studies related financial literacy to retirement planning (Lusardi & Mitchell, 2011; Adam, Boadu & Frimpong, 2018), financial inclusion (Noor et al., 2020; Kasozi & Makina, 2021), performance (Agyei, 2018; Agyapong & Attram, 2019; Menike, 2018), inclusive growth (Nyarko 2018; Rasheed & Siddiqui, 2018; Eniola & Entebang, 2016), gender disparity (Adam, 2017). But, a study on how financial literacy influences the financial well-being and control and decision-making power of women micro-entrepreneurs has not been sighted.

Also, there are numerous studies on financial inclusion (Nandru et al., 2021; Kumari & Azam, 2019; Salia et al., 2017; Pal et al., 2021; Hendriks, 2019; Bhatia & Singh, 2019; Chickwira et al., 2022; Goel & Madan, 2019), none of them examined how financial inclusion could influence economic empowerment of women micro-entrepreneurs in Ghana. Even where the researchers related financial inclusion to economic empowerment, the population for the study had been the rural poor, survival of violence, and urban slums. Therefore, there is a contextual gap, and this study filled that gap.

Moreover, the moderating influences of social networks and patriarchal culture in the nexus between financial literacy and economic empowerment; financial inclusion and economic empowerment, is yet to be sighted. The closest study in this regard is that of Ali et al. (2017), who revealed that networking greatly influences women's economic empowerment. However, the respondents were sampled from Muslim-dominated populations.

Similarly, empirical studies on patriarchy abound (Chickwara & Adams, 2020; Lecoutere & Wuyts, 2021; Selvie et al., 2023). Nonetheless, the copious bodies of academic literature that have examined the role of patriarchy have not yet investigated the moderating effect of patriarchal practices on the connection between financial inclusion and economic empowerment, as well as financial literacy and economic empowerment. This research, therefore, is in the right direction to contribute to the discussion on how financial literacy, financial inclusion, social networks and patriarchal culture influence the economic empowerment of Women micro-entrepreneurs.

### **Purpose of the Study**

The resolve of the investigation is to scrutinise the effect of financial literacy as well as financial inclusion on the economic empowerment of women micro-entrepreneurs in Accra Metropolitan Area and the moderating roles of social networks and patriarchal culture in the relationships.

### **Research Objectives**

The objectives of the study were to:

1. Evaluate the relationship between financial literacy and economic empowerment of women micro-entrepreneurs in Ghana
2. Examine the moderating role of social networks in the relationship between financial literacy and economic empowerment of women micro-entrepreneurs in Ghana.
3. Examine the moderating role of patriarchal culture in the relationship between financial literacy as well as economic empowerment of women micro-entrepreneurs in Ghana.
4. Assess the effect of financial inclusion on economic empowerment of women micro-entrepreneurs in Ghana.
5. Examine the moderating role of patriarchal culture in the relationship amid financial inclusion as well as economic empowerment of women micro-entrepreneurs in Ghana.
6. Examine the moderating role of social networks in the relationship amid financial inclusion and economic empowerment of women micro-entrepreneurs in Ghana.

## Research Hypotheses

The study was guided by the following hypotheses.

1. H1a: Financial awareness influences the control and decision-making power of women micro-entrepreneurs in Ghana.  
H1b: Financial knowledge influences the control and decision-making power of women micro-entrepreneurs in Ghana.  
H1c: Financial skills influence the control and decision-making power of women micro-entrepreneurs in Ghana.  
H1d: Financial behaviour influences the control and decision-making power of women micro-entrepreneurs in Ghana.  
H1e: Financial attitude influences the control and decision-making power of women micro-entrepreneurs in Ghana.  
H1f: Financial awareness influences the financial well-being of women micro-entrepreneurs in Ghana.  
H1g: Financial knowledge influences the financial well-being of women micro-entrepreneurs in Ghana.  
H1h: Financial skills influence the financial well-being of women micro-entrepreneurs in Ghana.  
H1i: Financial behaviour influences the financial well-being of women micro-entrepreneurs in Ghana.  
H1j: Financial attitude influences the financial well-being of women micro-entrepreneurs in Ghana.
2. H2a: Social network moderates the relationship amid financial awareness and control and the decision-making power of women micro-entrepreneurs in Ghana.

H2b: Social network moderates the relationship amid financial knowledge and control and the decision-making power of women micro-entrepreneurs in Ghana.

H2c: Social network moderates the relationship amid financial skills and control and the decision-making power of women micro-entrepreneurs in Ghana.

H2d: Social network moderates the relationship amid financial behaviour and control and the decision-making power of women micro-entrepreneurs in Ghana.

H2e: Social network moderates the relationship amid financial attitude and control and decision-making power of women micro-entrepreneurs in Ghana.

H2f: Social network moderates the relationship between financial awareness and financial well-being of women micro-entrepreneurs in Ghana.

H2g: Social network moderates the relationship between financial knowledge and financial well-being of women micro-entrepreneurs in Ghana.

H2h: Social network moderates the relationship between financial skills and financial well-being of women micro-entrepreneurs in Ghana.

H2i: Social network moderates the relationship between financial behaviour and financial well-being of women micro-entrepreneurs in Ghana.

H2j: Social network moderates the relationship between financial attitude and financial well-being of women micro-entrepreneurs in Ghana.



3. H3a: Patriarchal culture moderates the relationship amid financial knowledge and control and the decision-making power of women micro-entrepreneurs in Ghana.

H3b: Patriarchal culture moderates the relationship amid financial behaviour and control and the decision-making power of women micro-entrepreneurs in Ghana.

H3c: Patriarchal culture moderates the relationship amid financial awareness and control and the decision-making power of women micro-entrepreneurs in Ghana.

H3d: Patriarchal culture moderates the relationship amid financial skills and control and the decision-making power of women micro-entrepreneurs in Ghana.

H3e: Patriarchal culture moderates the relationship amid financial attitude and control and the decision-making power of women micro-entrepreneurs in Ghana.

H3f: Patriarchal culture moderates the relationship amid financial knowledge and control and the financial well-being of women micro-entrepreneurs in Ghana.

H3g: Patriarchal culture moderates the relationship amid financial behaviour and control and the financial well-being of women micro-entrepreneurs in Ghana.

H3h: Patriarchal culture moderates the relationship amid financial awareness and the financial well-being of women micro-entrepreneurs in Ghana.

H3i: Patriarchal culture moderates the relationship amid financial skills and the financial well-being of women micro-entrepreneurs in Ghana.

H3j: Patriarchal culture moderates the relationship between financial attitude and financial well-being of women micro-entrepreneurs in Ghana.

4. H4a: Access influences the control and decision-making power of women micro-entrepreneurs in Ghana.

H4b: Usage influences the control and decision-making power of women micro-entrepreneurs in Ghana.

H4c: Quality influences the control and decision-making power of women micro-entrepreneurs in Ghana.

H4d: Access influences the financial well-being of women micro-entrepreneurs in Ghana.

H4e: Usage influences the financial well-being of women micro-entrepreneurs in Ghana.

H4f: Quality influences the financial well-being of women micro-entrepreneurs in Ghana.

5. H5a: Patriarchal culture moderates women micro-entrepreneurs access and control and decision-making power in Ghana.

H5b: Patriarchal culture moderates the usage, control, and decision-making power of women micro-entrepreneurs in Ghana.

H5c: Patriarchal culture moderates quality and control and decision-making power of women micro-entrepreneurs in Ghana.

H5d: Patriarchal culture moderates access and financial well-being of women micro-entrepreneurs in Ghana.

H5e: Patriarchal culture moderates usage and financial well-being of women micro-entrepreneurs in Ghana.

H5f: Patriarchal culture moderates the quality and financial well-being of women micro-entrepreneurs in Ghana.

6. H6a: Social network moderates quality and control and decision-making power of women micro-entrepreneurs in Ghana.

H6b: Social network moderates usage and control and decision-making power of women micro-entrepreneurs in Ghana.

H6c: Social network moderates access and control and decision-making power of women micro-entrepreneurs in Ghana.

H6d: Social network moderates quality and financial well-being of women micro-entrepreneurs in Ghana.

H6e: Social network moderates usage and financial well-being of women micro-entrepreneurs in Ghana.

H6f: Social network moderates access and financial well-being of women micro-entrepreneurs in Ghana.

### **Significance of the Study**

The study examined the implications of financial inclusion and financial literacy as a factor influencing economic empowerment of women. It is believed that this study has contributed to policy by drawing the attention of Government through its agencies on the need to intensify their efforts in enhancing the provision of credit facilities to women micro-entrepreneurs in order to help them grow their businesses. The study findings are likely to provide valuable source of information for the Government intervention policies to empower women in micro-businesses in Ghana. Financial literacy

and access to credit facilities help women micro-entrepreneurs to grow their businesses (Andriamahery & Qamruzzaman, 2022). Policymakers would draw insights from the study to aid them in decisions concerning the relevance of increasing financial inclusion of micro-women entrepreneurs.

Also, the conclusions contribute to practice by providing insight to the associations of women entrepreneurs about the need for their members to widen their networking since it aids in acquiring revamping their business and recognizing prospective business possibilities. The study is expected to assist micro finance institutions in designing relevant facilities for women micro entrepreneurs.

The study has enlightened policy makers on factors influencing economic empowerment of women micro-entrepreneurs. The findings of the investigation have contributed to the appreciation of how, in addition, financial awareness as well as financial skill can influence the economic empowerment of women. By considering the moderating role of social networks and patriarchal practices in enhancing economic empowerment, the study could deepen the empirical understanding of financial literacy educators on factors influencing economic empowerment of women micro-entrepreneurs.

### **Delimitation of the Study**

The study concentrates on the economic empowerment of women micro-entrepreneurs. It examines financial literacy, financial inclusion, social networks and patriarchal culture as factors that influence the economic empowerment of women micro-entrepreneurs. It is limited to women micro-entrepreneurs in the Accra Metropolis. The choice of women micro-

entrepreneurs is based on the need to empower the larger percentage of MSMEs who are poor. Statistically, women micro-entrepreneurs dominate the MSMEs. Again, the Metropolis has the largest number of micro-entrepreneurs (65,771) in the Greater Accra Region (IBES, 2016). This figure is likely to be higher now, but until IBES 2023 is ready, IBES 2014 and IBES 2016 remain relevant.

The study's geographical area is limited to Accra Metropolis, a cosmopolitan and heterogeneous society. It hosts many women micro-entrepreneurs, most of whom have migrated from other regions in the country. The Metropolis has three sub-Metros with communities such as Mamprobi, Dansoman, Chorko, Ngleshie, Abbossey and Kaneshie, among others. This area presents a suitable location for the study because it harbours female entrepreneurs with diverse microeconomic activities, such as fish mongers, hairdressers, retailers, foodstuff sellers, chop bar operators, caterers and fashion designers.

### **Limitations of the Study**

Accurate population figure for sampling determination is very useful in research. The limitation of this study stems from the difficulty in getting an accurate population of women micro-entrepreneurs in Accra Metropolis to determine the sample size. This was a major challenge because the Ghana Statistical Services report indicates only the population of micro-entrepreneurs without separating women micro-entrepreneurs from men micro-entrepreneurs (GSS IBESS, 2016). This notwithstanding, the sample size was determined with empirical evidence on the percentage of women engaged in MSMEs in Ghana, as evidenced in Agyei (2018) and GSS (2014).

Due to low education, some respondents were unable to provide credible and accurate responses to the questionnaire. However, this challenge was overcome by increasing the number of distributed questionnaires far more than the sample size.

### **Definition of Terms**

**Financial literacy** involves awareness of financial issues that enable the individual to make sound financial decisions (OECD, 2013).

**Financial attitude** refers to one's beliefs and values related to different personal finance principles, such as whether one thinks it is necessary to save money (Banthia & Dey, 2022).

**Financial knowledge** is the acquisition of basic information about financial concepts (Kumari et al., 2020).

**Financial awareness** is the state of being aware of financial terms such as savings, insurance, investment and inflation through various means, including television, radio and social networks (Murugiah, 2016).

**Financial behaviour** deals with human behaviour involving putting into practice financial knowledge, such as preparing a budget and controlling it, regular savings habits and quick payment of bills (OECD, 2013).

**Financial skills** involve understanding and applying financial literacy ideas such as budgeting, investing and borrowing (Lusardi, 2019).

**Financial inclusion** is the degree to which the vulnerable and disadvantaged group of society is provided with access to and usage of formal financial services at an affordable cost (Gopalan & Rajan, 2018). The formal financial services include savings, credit, remittance, insurance, mortgages, money transfer and pensions.

**Access** to financial inclusion involves the availability of financial institutions and the affordability of their facilities (Arora, 2018).

**Usage** is the use of financial facilities such as operating bank accounts, using ATM services and insuring property and life (Ashoka & Aswathy, 2021).

**Quality** is the ability of financial facilities to satisfy the financial needs of clients (Ojo & Zondi, 2021).

**Economic empowerment:** Economic empowerment is the ability of women to improve upon their finances and act on economic decisions (Irawan & Nara, 2020). For this study, it consists of control, financial well-being and power to make decisions.

**Control and decision-making Power:** The ability to manage income and expenditure as well as the power to make decisions that affect one's life (Kumari et al., 2020).

**Financial well-being:** The situation whereby the individual is satisfied with his/ her present and future financial obligations that enable him or her to make choices that result in the enjoyment of life (Adam et al., 2017)

**Social network:** It describes the interrelationships between individuals, families, household and communities, either formal or informal and their influence on the way they behave (Bongomin et al., 2018)

**Patriarchal culture:** Patriarchal culture deals with males' superiority over females in the family, community and nation, as well as women's subordination to men (Mawa, 2020).

### **Organisation of the Study**

The study is divided into seven chapters. Chapter One deals with the introduction of the study and involves the background of the study, problem

statement, purpose of the study, objectives of the study, research hypothesis, significance of the study, delimitation and limitation of the study and definition of keywords used in the study.

Chapter Two consists of theoretical reviews which deal with the various theories underpinning the study. Related concepts in the study were reviewed. Some research works that have been carried out and are related to the study were reviewed. The chapter ended with a conceptual framework.

Chapter Three considers the methodology of the study. This involves the study area, research design, the population of the study, sampling technique and the sample size. It further deals with the sources of data, data collection instruments, data analysis and ethical considerations. Background information of respondents is found in Chapter Four. Analysis and discussion of the research objectives are found in chapters five and six. Finally, Chapter Seven consists of a summary of findings, conclusion and recommendations.



## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

The presentation in chapter two is in four major parts: the theoretical review, empirical review, deduction from previous studies and conceptual framework. It ends with a chapter summary. Every research study is underpinned by theories that shape how the research objectives are set and hypotheses established. The theoretical review provides an understanding of the research problem, the objectives and the hypothesis, as well as shaping the methodology. The first part, therefore, deals with theories such as empowerment theory, social learning theory, social network theory, and patriarchal theory. These theories, among others, are relevant in understanding financial literacy, financial inclusion, social network, patriarchal culture and their relationship with the economic empowerment of women micro-entrepreneurs in Ghana. This is followed by the empirical review of related studies as well as deduction from previous studies. The chapter ends with the conceptual framework and chapter summary.

#### Theoretical Review

This unit clarifies the relevant theories that serve as bedrock for the thesis. This thesis is based on five theories namely; the empowerment theory (Rappaport, 1981), Kabeer's three-dimensional model (Kabeer, 1999), attribution theory (Heider, 1958), social network theory (Casson & Giusta, 2007), social learning theory (Bandura, 1977) and the patriarchal theory (Lim, 1997). The empowerment theory and attribution theory effectively explain how financial literacy and financial inclusion can influence economic

empowerment of women. The researcher also explains how the social network theory, social learning theory and the patriarchal theory can strengthen or weaken the direct connection between financial literacy/financial inclusion and economic empowerment of women; hence their use as moderators in the relationships.

### **Empowerment Theory**

Pinioned by (Rappaport, 1981), the empowerment theory sought to posit that some disadvantaged and vulnerable individuals are deprived of power, and they should be assisted to gain the opportunity to make life choices for their betterment. By assisting them to acquire the necessary resources, they will be in a better position to have choices in life which may empower them. Rappaport (1981) and Zimmerman (2000) stated that empowerment involves processes and outcomes, and the processes entail interventions for empowerment, while the outcomes involve the consequences of empowerment.

Similarly, Peterson et al. (2005) corroborated by stipulating that empowerment theory includes both process and outcome and the process involves activities, actions and structures that result in achieving the goals in life, such as sound financial well-being and control. In the context of this study, the process involves providing the necessary interventions. Such interventions could be in the form of enhancing financial literacy, financial inclusion and social networks among women microentrepreneurs. The outcome part of the empowerment theory deals with the results of empowerment, which involves the attainment of the goals of women micro-entrepreneurs.

When vulnerable and poor people are provided with resources such as microcredit and financial literacy, their financial well-being improves and they become knowledgeable in financial matters that could translate into better decision-making and financial well-being. This portrays a linkage between financial literacy, financial inclusion and economic empowerment of women micro-entrepreneurs. It should be noted that, what empowers some people may not be needed in empowering other people (Rappaport, 1981; Zimmerman, 2000). Therefore, there is a need to consider the context under which one is applying the construct of empowerment to use the appropriate measurement to conceptualize it.

Sen's (1991) disposition of empowerment theory is also worth noting in this research. The theory explains the need to economically empower people to reduce poverty in the world and consequently enhance their well-being. In so doing, Sen (1991) proposed making available the required resources to the poor and disadvantaged people to enable them to come out of their poverty. His contribution to empowerment theory is similar to (Rappaport, 1981) because he also related poverty to the deprivation of some people by modern society through restricted access to resources. Both Sen (1991) and the pioneering works of (Rappaport, 1981) have something in common as far as empowerment is concerned. They all emphasize resources (education, finance, social networks and human rights) as necessary to empower the disempowered.

The application of empowerment theory was noted in the study conducted by Khan and Suriseti (2022) and Xue (2019). The researchers indicated that women contribute to decision-making and enjoy financial well-

being when provided with the requisite resources. Also, Turner and Maschi (2015) applied this theory and noted that there is an unequal share of power between men and women, resulting in women being disadvantaged. Consequently, decisions concerning ownership of assets, savings and investment options are the preserve of men, leaving women with little or no influence on household issues and decision-making.

One criticism of empowerment theory is that it is not easy to test it in research and that it lacks empirical support (Zimmerman, 2000). However, researchers (Kumari et al., 2020; Suprava, 2014) have empirically applied the empowerment theory in their studies, suggesting that it can be applied in empirical studies. They reiterated that empowerment is a complex construct and involves resource, agency and attainment. Another criticism is that the construct deals mostly with individual empowerment as compared to community and organizational empowerment. However, Rappaport (1981) extended the definition to individuals, communities and organizations.

Later disposition of this theory was provided by Zimmerman and Warschausky (1998), who defined empowerment as the process whereby the goal of the individual and how to achieve it is recognized, as well as the relationship between their efforts and life outcomes. Zimmerman (2000) also contributed to this theory and succinctly explained how empowerment involves a process of having control over decisions that affect life choices. Empowerment interventions cannot be the same for every individual or group in all contexts (Zimmerman, 2000)

Empowerment theory is relevant to this study because resources such as financial literacy, financial inclusion and social networks are necessary for

the women micro-entrepreneurs to enhance their decision-making power, exercise control over their income and expenditure and enjoy financial well-being. Thus, the influence of financial inclusion and financial literacy on economic empowerment is premised on empowerment theory.

Whilst, empowerment theory provided a linkage amid financial literacy, financial inclusion as well as economic empowerment, it failed to explain how the process of providing the resources for empowerment would be achieved. However, Kabeer's Three-Dimensional Model introduced agency as a conduit to achieve empowerment thereby enhancing the understanding of empowerment theory. Hence, the need to consider Kabeer's model to support empowerment theory in explaining how financial literacy and financial inclusion influence economic empowerment.

### **Kabeer's Three-Dimensional Model**

Developed in 1999 from the Trans Theoretical Model (TTM), Kabeer's Three-dimensional model sought to explain the process and outcome of empowerment. Kabeer (1999) posited that empowerment involves process and outcome that encompasses resources, agency and achievement. Kabeer (1999) reiterated that resource, agency and achievement are indivisible, and hence, their applications in empowerment discourse.

According to Kabeer (1999), resources are not only material things but also human and social resources that enable women to have choices. The resources that are pre-condition for women's economic empowerment include micro-loans, financial literacy, social networks, land and property (Alao et al., 2022). Whereas agency involves negotiation, bargaining power and the ability to access these resources, achievement is the outcome of empowerment, which

is manifested in the well-being and decision-making power of women. It is difficult for women to have the resources that can empower them in an environment where women empowerment issues have not been considered important (Kabeer, 1999). Therefore, women should negotiate or bargain for empowerment and those involved in the providing the resources are the agency.

Using Kabeer's (1999) three-dimensional model in the connection amid financial literacy, financial inclusion, and economic empowerment is appropriate, in the sense that women micro-entrepreneurs require resources such as land, financial assistance, and financial knowledge, among others, to be successful in their economic activities. When they become successful and advance economically, their financial well-being becomes assured. Also, when they are financially literate, they become knowledgeable in financial matters that make them capable of contributing to household decision-making and income.

In a related study, Kumari (2020) applied Kabeer's three-dimensional model to explain the conceptual framework of her study. According to Kumari (2020), the model is suitable for explaining the relationship between financial literacy, financial inclusion and economic empowerment. The acquisition of financial literacy and the use of financial products and services provide the capacity to make decisions that enhance their financial well-being.

Being financially literate and having access to credit does not necessarily mean that one can be empowered. Some women micro-entrepreneurs may have financial knowledge but may not invest prudently, thereby affecting their financial well-being. So, economic empowerment of

women micro entrepreneurs could be attributed to how resources are effectively and efficiently utilised. Attribution theory explains how individuals attribute the cause of their behaviour, situations and events, which is either a failure or success. Hence, the need to consider the theory in the relationship between financial literacy, financial inclusion and economic empowerment.

### **Attribution Theory**

Originally introduced by Heider (1958), the attribution theory focused on the causes of individual actions and why some events happen in a certain manner. According to Heider (1958), there is always a reason why events happen, how people behave, why some people succeed and others fail and the consequence thereof. This implies that the lack of empowerment of women micro-entrepreneurs has causes that emanate from many sources, including poor financial inclusion and financial literacy (Kumari et al., 2020; Salia et al., 2018).

Based on Heider (1958), several attribution theories have been developed and notably among them are two models developed by Kelley (1973) and Weiner (1972), which have been widely used within academic literature. According to Kelley's (1973) model, one can attribute the causes of other people's behaviours to three main cause domains: the person himself/herself, the circumstances of the moment and the environment. He argued that behaviour has a cause and requires to be investigated in order to find out the cause that can shape an appropriate response.

On the other hand, Weiner's (1972) model touches on how people explain their success or failure in achieving their goals or performing a task. The model further explains two dimensions as attributable to the causes of

success/failure of oneself: locus of causality and stability. Thus, Kelley's (1973) model looks at the causes of other people's failure or success, whereas Weiner (1972) touches on the causes of one own success or failure.

Locus of control deals with the root cause, which can be internal or external. For example, the skills and efforts displayed by the micro-entrepreneur can be the cause of his/her success in business. For the external causes, one can attribute it to luck or the nature of the difficulty associated with the task. Weiner concluded that one derives greater satisfaction with the internal cause than the external cause when achievement is attained. The main difference between Kelley's model and Weiner's model is that whilst the former concerns someone finding the causes of other people's behaviours, the latter deals with someone attributing the causes of his/her behaviour to himself or herself.

The attribution theory was employed by Hewett et al., (2018) in their study titled "Attribution theories in human resource management research: a review as well as research agenda", which concluded that understanding the causes of employee behaviour provides an insight into human resources (HR) management. They further found that some employees perform better than others, which can be attributed to some causes that require attention.

In spite of the wide use of attribution theory, it has received its share of criticism (Newcombe & Rutter, 1982; Semin, 1980). One of the major criticisms is that the theory does not have a universal application because of cultural diversity that makes people perceive and attribute events and behaviours differently (Choi et al., 1999). According to them, people actively



interpret the causes of their situations, events, or environment in different ways depending on the context.

They argue that attribution would not work the same contextually, and what people believe as the cause of certain behaviours and events in advanced countries may not be the same in less developed countries. For example, while inadequate financial inclusion might be a major factor militating against entrepreneur's performance in less developed countries, it is not the case in advanced countries where they have a wider financial inclusion. Pal et al. (2022) indicate that African countries have high illiteracy rates and low financial inclusion. Therefore, comparing this to European countries where the situation is different and assigning the same causes to low empowerment of women micro-entrepreneurs would not be in the right direction.

The study examines the effect of financial literacy as well as financial inclusion on economic empowerment. In addition, it considers the moderating roles of social network and patriarchal culture of the relations aforementioned. Unfortunately, the moderating roles are not explained by attribution theory, empowerment theory and the Kabeer's three-dimensional theory. Therefore, social network theory, social learning theory and patriarchal theory will be used to address this weakness.

### **Social Network Theory**

According to Casson and Giusta (2007), there are many forms of networks, and each network works for a different purpose. For example, the social network is different from the infrastructural network and computer network. Propounded by Burt (1997), the theory of social networks posits that

individuals have varying and independent needs and such needs are influenced by the behaviour of the members of the network.

Granovetter (1983) identified two ties in social networks: strong ties and weak ties. Strong ties comprise relatives, close friends and neighbours, whilst weak ties are made up of acquaintances and friends of friends. Granovetter (1983) asserts that weak ties are capable of providing information and resources more than strong ties and that most people tend to benefit more from information from friends of friends since they provide a wider network. Contributing to the theory, Liu et al. (1980) asserted that whether one would rely on weak ties or strong ties depends on the benefits derived from these ties. He further explained that weak ties are sometimes more beneficial to some people than strong ties, and depending on how relationships are perceived and built, one of the ties provides a great source of information.

Sometimes, individuals have similar needs, and these needs are shared in the best interest of actors in the network. According to Granovetter (1983), the social network brings individuals together as a community, and through interaction, they can share and disseminate information that contributes to their decision-making and financial well-being. Thus, social network theory explains the benefits individuals gain interacting in a group when social ties are developed that deepen information flow among the group (Borgatti & Foster, 2003; Carpenter et al., 2012; Kilduff et al., 2006).

The use of the social network as a moderator in the connection between financial literacy and economic empowerment is in the right direction because the presence of social interaction among women micro-entrepreneurs can strengthen the connection between their financial literacy level and

economic empowerment. Even though financial literacy can positively influence economic empowerment, the presence of social networks can enhance this relationship. Related to financial inclusion, the social network enables the woman micro-entrepreneur to obtain information on the availability of micro-credit that can improve her business and, consequently, her financial well-being.

In a related study, the use of social network theory, as noted by Pallares-Barbera and Casselas (2019), clearly indicates that close and weak ties of women's social networks provide avenues for sharing information, which is useful in household and workplace decision-making. Women micro-entrepreneurs can get information about micro-credit through social networks, which may eventually improve their financial well-being. Similarly, Borgatti and Foster (2003) posits that different interactions and relationship occur and provides different benefits depending on the need of a person in the network. This implies that the individual in the network can rely on ties emanating from friendship, workplace and community members for particular information needed.

Inadequate social networks of women entrepreneurs prevent them from accessing information regarding resources for growing their businesses. The social network is an extension of social capital, and according to Widiyanti et al. (2018), access to resources through interaction in social networks is a major impetus in the economic empowerment of poor women. Even though, social network theory explains the moderating role of social network in the connection amid financial literacy and economic empowerment, what deepens this relationship is not addressed. Hence the use of social learning theory, as it

explains how individuals, through social interaction, can learn by observing and imitating themselves thereby influencing their behavioural patterns.

### **Social Learning Theory**

Social learning theory, postulated by Bandura (1977) suggests that, individuals learn by exhibiting behaviours that they observe from their colleagues which shape their lives for the better. Also, young children imitate adult behaviour and this model the behaviour of these children into future business activities. Social learning theory applies to human behaviour studies in which certain factors such as environmental factors and personal factors influence behaviour (Hunter-Reel, 2013; Neighbor, et al., 2013).

Development of Cognitive skills can be influenced by various forms of learning. Bandura and Wessels (1997) also assert that individuals also learn through modelling that guides their behavioural patterns and consequently impacts the outcome of the activity. However, not all social learning can result in a change of behaviour, as behavioural change requires laborious effort and zeal. The traditional learning theories suggest that the individual can learn through direct experience. However, Bandura's social learning theory posits that the individual can learn through observation. Power, gender, social status, or competence that are associated with social learning theory make people believe that modelled behaviours are appropriate, and they are motivated by these attributes to keep being influenced by their colleagues.

Parents who apply financial management skills in managing businesses serve as models for their children who become entrepreneurs. Such entrepreneurs exhibit financial management skills behaviours that are modelled by their parents (Mehralian et al. 2020). Solving financial problems

and the ability to control income and expenditure, be it at the household level or business level, can also be influenced by what has been imitated (Ramsden & Moses, 1992).

Social learning theory is used to support social network theory in explaining the moderating role of social networks in the connection amid financial literacy and economic empowerment. In a social network setting, women micro-entrepreneurs improve their financial literacy through observation, modelling and imitating one another, which impact positively on their decision-making power. Consequently, they can control their income and expenditure.

Not all social learning through social networks can improve the connection between financial literacy and economic empowerment. One can learn or imitate negative financial practices such as investment in a Ponzi scheme to get quick money which eventually impacts negatively on their financial well-being, as a majority of these Ponzi scheme investments fail. Akers and Jennings (2015) applied social learning theory in their studies involving crime and deviant behaviour. They concluded that people copy bad behaviours through their interactions with others in their peer group.

How the connection between financial inclusion and economic empowerment is strengthen or weakened could not be addressed by social learning theory. Therefore, patriarchal theory will be employed since its presence could weaken the positive influence of financial inclusion on economic empowerment of women micro-entrepreneurs.

### **Patriarchal Theory**

The patriarchal theory deals with male dominance over females in the family, community and nation (Lim, 1997). The origin of patriarchal theory dates back to the seventeenth century in Sir Henry Maine's exposition of the scriptural history of the Hebrews Patriarchs. Rankhotha (2004) established that since ancient times, the eldest males of parents were considered supreme in the family and by extension, in society. Many societies modelled their household superiority on this theory, which by and large has continued to permeate some modern societies in the world. Subsequently, Morgan (2004), in his great works on human family and ancient society, criticized the work of Rankhotha (2004) because they are more primitive socio-cultural practices than those exhibited in the scriptures and the Roman History regarding patriarchy.

The patriarchal theory has been very popular and vehemently opposed by feminist proponents around the world because it is against women's freedom. Patriarchy discriminates against women in many endeavours and restricts them from attaining their life goals. According to the patriarchal theory, women are not born to make money, rather, men are supposed to work hard to make money and to cater to the family (Mirkin, 1984). Therefore, women are not supposed to engage in certain activities that are described as masculine activity.

Society expects women to start their enterprises or ventures while maintaining their responsibilities as wives and mothers, which are based on gender (Al-Dajani & Marlow, 2010; Banihani, 2020). Because they are in charge of managing a household, they might not be able to seize possibilities

for having more control over their lives (Kabeer, 2021). As a result, women's business endeavours frequently reinforce established family arrangements. The endemic patriarchal framework with its power differential, which is ingrained in women-owned businesses, is rarely questioned or resisted, even though some semblance of empowerment is gained.

Stromquist (1998) stated that men have secured the consent of women in the feminine and masculine roles to the extent that women's subordination to men has been reinforced by institutions such as the church, family and the state. The ability of a man to command a woman to subordination is an achievement and a sign of his superiority to the woman (Silverstein & Lynch, 1998). It is, therefore, not surprising that in some parts of the world, women have accepted some roles such as cooking for the family, washing clothing and preparing children for school. According to Adom et al. (2018), these roles considered family responsibilities ultimately pose a challenge to the woman's entrepreneurial performance.

Where patriarchal culture is more prevalent, women are denied the right to own assets, take savings and investment decisions as well as the power to control family income. However, Quagraine (2018) argued that when harnessed very well, patriarchal practice can improve family cohesion when the man supports the woman and accepts her contributions to the family decision-making. The theory of patriarchal culture can be accentuated in its moderating role in the connection between financial literacy and economic empowerment. Where patriarchal culture is pervasive, women are prevented from learning financial literacy skills that can be used in controlling income and expenditure and decision-making. Eventually, their financial well-being is

affected. Again, the presence of patriarchal practices affects the connection between financial inclusion and economic empowerment of women entrepreneurs.

Even though women may get access to loans from financial institutions, they are sometimes prevented by their husbands from making decisions concerning the use of the loans. In some instances, part of these loans is used to support the family in diverse ways. When they are unable to pay the loan back their financial well-being is affected. This suggests that patriarchal practice can influence how financial inclusion impacts the economic empowerment of women micro-entrepreneurs.

## **Empirical Review**

### **Effect of Financial Literacy on Economic Empowerment**

Financial literacy is an amalgamation of knowing financial principles and having the capability and trust to handle personal finances by making sound financial decisions while staying alert to changes in the business environment. (Mishra et al., 2022; Panakaje et al., 2023). It involves financial knowledge, financial skills, behaviour, attitude, and awareness (INFE/OECD, 2017). Economic empowerment, according to Irawan and Nara (2020), is the capacity of both men and women to partake in, contribute to, and benefit from growth processes in ways that respect their dignity, acknowledge the value of their contributions, and enable the negotiation of a more equitable distribution of the benefits of growth. Financial literacy enables women micro-entrepreneurs to access, own and control resources for their financial well-being (Karimli et al., 2021). Also, a financially literate business owner is



capable of making sound financial decisions regarding financial planning, sourcing and utilisation of funds (Agyei et al., 2019; Koskelainen et al., 2023).

Research on financial literacy and economic empowerment of female entrepreneurs has been conducted by several scholars worldwide. For instance, in the setting of Sri Lanka, similar study was conducted on rural impoverished people. This was investigated by Kumari et al. (2020). The sample for the paper was chosen from among low-income families who live in poverty in nine regions across the country. Four hundred and twenty-six questionnaires were issued in total, with 386 completed surveys collected for final analysis. Five primary characteristics of economic empowerment of women (Control over the usage of revenue and expenses, Decision-making power, Time apportionment, Leadership, and Financial-wellbeing) were used.

Financial literacy was assessed using a set of 25 items to establish the four important elements (financial behaviour, financial knowledge, financial awareness and financial attitude,). The sample was chosen using the multilevel mixed sampling approach, with the women-headed families in the rural regions comprising 25 districts covering every region as the unit of analysis. Furthermore, the data was analysed using PLS-SEM and the main analytical programme was Smart PLS 3. The descriptive analysis, on the other hand was carried out using IBM (SPSS 22).

It was found that financial literacy had considerable implication on women advancement amongst the rural underprivileged, according to the research. Consequently, the researcher concluded that financial literacy helped to advance the concerns of women in Sri Lanka. Financial Literacy has a significant effect on the economic decision-making ability of women in rural

areas of Sri Lanka. This study however was limited to rural impoverished people; hence the findings cannot be generalised to the whole population. Secondly, financial conduct and financial attitude which are relevant dimensions of financial literacy have not been covered. Besides, the study did not investigate how financial literacy can influence control and decision-making power and well-being of women micro-entrepreneurs in Ghana.

Another study conducted by Adam et al. (2017) looked at how financial behaviour, financial literacy, family support, retirement planning and the number of dependents affect pensioners financial well-being in Ghana. The impact of financial behaviour, financial literacy, retirement planning, number of dependents, and family support on financial wellness was studied using a cross-sectional survey approach on 400 participants chosen at random amongst 1,500 members of the association. The sample was distributed as 187 out of 700 women and 213 out of 800 males. Sampling at random reduces sample biases and ensures that the results are generalisable. The association's members include retirees from a variety of occupations who have voluntarily or statutory retired.

The variables were assessed using many items, considering present scales and literature on financial behaviour, financial well-being, financial literacy and retirement planning. Nine objective financial literacy measures from OECD and INFE (2011) and Lusardi and Olivia (2008) were adopted to measure financial literacy. The item enquiring about retirees' pension planning was developed using the work of Boisclair et al. (2017). The participants' overall awareness of budgeting, operation of an Automated Teller Machine (ATM), account kinds, cheque handling, time value of money, and

insurance was assessed using ten (10) multiple-choice questions. Each respondent's composite score was then utilised. Statements were used to assess the variables; it then used PLS-SEM approach, to study their hypothesized correlations.

The findings indicated that retirement planning, financial literacy, and family support have considerable implication on pensioners' financial well-being. More crucially, family support and retirement planning have a greater implication on seniors' financial well-being than financial knowledge. This paper relied on responses of male and female retirees who are above sixty (60) years.

Agyei et al. (2019) investigated the influence of culture in the connection amid financial literacy and financial status of SME owners in Ghana, an emerging country. The research used 300 randomly selected SME owners from Ghana. The sample size of 300 SMEs was determined using a process similar to that employed by Agyei (2018) to address the difficulty of obtaining correct information on SMEs throughout the study period. Five key questions were utilised to evaluate the respondents' financial literacy level, as recommended by Agyei (2018). Risk and return, diversity, and inflation were all included in the questions. The internal consistency of the instruments were assured through pre-testing and assessment by a team of professionals.

The findings indicated that SME owners' financial literacy has a significant implication on their advancement. Furthermore, Protestant doctrine stifles the process of SME owners accumulating financial riches. Finally, the research revealed no evidence that culture influences the connection between financial literacy and well-being. It must be noted that financial attitude was

not considered in the financial literacy construct. Again, the unit of analysis was SMEs. Financial literacy needs to be assessed beyond inflation as well as risks and returns (Kumari et al. (2020). Financial behaviour and financial attitude are contemporary dimensions of financial literacy that best influence women empowerment.

The influence of a collaborative training program for financial literacy and women's empowerment on household spending as a well-being measure was investigated by Koomson et al. (2020). They used ordinary least squares to predict the ending effect utilizing data from a randomized controlled experiment conducted in Ghana. The study's data came from a research conducted by Rural Enterprise Programme (REP), and Roots and Tuber Improvements and Marketing Programme (RTIMP).

The qualified respondents were scattered across ten districts in Ghana's seven regions. There were 801,111 qualified responders, with 66,911 being beneficiaries and 741,200 being non-beneficiaries. The findings demonstrated that the design and implementation of financial literacy programs have an impact on household spending. A stronger immediate benefit of financial literacy training on household spending occurs from the addition of a women's empowerment module. The study was purely quantitative, using ordinary least squares in the analysis. Also, the unit of analysis was household. This study focused mainly on how training of housewives in financial literacy programmes will improve their spending at home in terms of budgeting and savings. In modern times, most women are bread winners. They also work to earn income to support their husbands financially. This is one of the reasons

why this study wants to focus on women micro-entrepreneurs in Ghana since they earn money through trading.

Rai et al. (2019) established a connection between financial conduct and financial literacy using females in India. 394 working females from different public and commercial establishments in Delhi were included in the sample. Purposive sampling was utilised to select the respondents. The investigation's conclusions specified that active women's financial attitudes and financial literacy are closely associated. Financial conduct and financial attitude have a stronger relationship with working women's financial literacy than financial knowledge, according to the data. It was observed that financial education is not the sole factor of financial literacy but that financial behaviour and attitude are similarly significant and have a favourable influence on women's financial literacy.

This study focused more on women in the formal sector who earn monthly income and automatically contribute financially towards their retirement. What about women in the informal sector who do not contribute towards their retirement? This researcher believes that a study needs to be conducted on how financial literacy variables like financial attitude and financial behaviour can influence the economic empowerment of individual business women at the micro level. This will go a long way to reduce poverty in the country.

Adam (2017) uses a homogeneous group of 560 randomly selected and responding business students from the University of Cape Coast, Ghana, to investigate the actuality or otherwise of gender disparities in financial literacy. The goal is to have a clearer grasp of the perplexing problems surrounding the

gender dimension of financial literacy. The study used a cross-sectional and quantitative study of the University of Cape Coast's business students in Ghana. This investigation utilized a stratified sampling procedure to randomly pick 600 students from a target population of 1500 from the UCC's School of Business in Ghana who were studying Bachelor of Commerce (BCom) and Bachelor of Management Studies (BMS).

The sample size was established using the minimal returned sample size determination table developed by Kotrlik and Higgins (2001), with a 50 percent percentage ( $p = 0.5$ ), a margin of error of 0.05, and a nonresponse rate of 20%. A total of 560 people answered, which was then used in the analysis. To test or measure financial literacy, the study used a questionnaire revised from those used by Lusardi and Olivia (2008) and Lusardi (2012). The questionnaire contains fifteen (15) questions, three (3) of which produce demographic and socioeconomic information such as gender, level of study, and program, and twelve (12) of which measure financial literacy.

Twelve (12) multiple-choice questions were used to elicit the participants' overall awareness on deliberation for the timing of buying on credit, taking a loan from a financial institution, use of Automated Teller Machines (ATM), account types, money's time value, savings, investment return, risks, and insurance. The questionnaires were first tested on twenty (20) non-business students, and some of the questions were changed. This study examined gender disparities in financial literacy among a homogenous population of 560 business students using a Chi-square and Independent t-test.

Male respondents were shown to have a computational edge, but female respondents had a non-computational advantage. The chi-square test of

independence and the independent t-test, however, revealed that the observed nominal difference was not significant. The effect sizes are all quite minor, suggesting that differences are vanishing due to the homogenous character of the sample. The inference is that the observed considerable gender difference in financial literacy favouring males might be due to sample dissimilarity and that further financial education, regardless of one's financial attitude or experience, can bridge the literacy gap. This study just looked at reasons why male students are more financially literate than female students without looking at how financial literacy can influence their well-being. Besides, focusing on students who are not working may not bring reliable finding. This study will use women who earn income from petty trading as suggested by Awuku, and Ampah (2022) and assess how current dimensions of financial literacy will impact on their empowerment in terms of economic decision-making and leadership in society.

Abubakar (2015) examined the degree of financial literacy in Africa using data from past research and financial literacy surveys to determine how financial literacy influences entrepreneurial evolution in Africa. The study focuses on how financial literacy influences household behaviour concerning making financial decisions, as well as gender differences in financial literacy. As financial literacy gains traction in both advanced economies with modern financial schemes and emerging countries with limited financial services, this study aims to create a formal connection between access to finance and financial literacy, as well as the implications of both for the development of an entrepreneurship culture in Africa. It also looks at the link between gender and financial decision-making, plus access to capital, to assess the consequences

for entrepreneurial growth. The research used a mixed methodology research design to achieve the stated goal.

The results demonstrate that market access, financial access, entrepreneurship culture and policy support are the primary issues and barriers to the growth of entrepreneurship in Africa. These variables impacted financial literacy on the continent, particularly among micro, small, and medium-sized enterprises. Significant problems in the entrepreneurial ecosystem include an unfavourable investment environment, a lack of entrepreneurship training programs, an unfavourable business environment for investments, gender inequality, and a lack of value chains. This study ignored important dimensions of financial literacy that were recommended by Kumari et al. (2020). These are financial behaviour and financial attitude. Again, the study focused mainly on prudent spending of money at home. This study will however, look at how modern variables of financial literacy will influence empowerment of women in terms quality financial decisions and leadership in society.

In an employment setting, Krische and Mislin (2020) studied the relevance of financial literacy in beginning and attaining a beneficial bargaining conclusion. The extant study analyzes whether strengthening an individual's comprehension of key financial ideas ("financial literacy") helps their financial decision-making intending to enhance long-term advancement. Financial literacy is measured objectively as the correct evaluation of fundamental financial ideas, financial knowledge, and financial skills. The study analyses the connection between these indicators of financial literacy and (a) the possibility of opening negotiations and (b) the result of a



negotiation, if one is started, in several studies involving undergraduate students of business courses and adults hired from an online crowd-sourced service. The survey was done by participants completing some background questions involving the financial literacy assessments.

The findings imply that participants' desire to participate in bargaining is influenced by their financial confidence, whereas their initial offer level is influenced by their financial expertise. These findings imply that financial literacy has substantial consequences for professional progression and remuneration, as well as effective interpersonal communication management, particularly in domains where numerical reasoning abilities are not usually valued. The study looked at the relevance of financial literacy in terms of quality decisions. This study will look at how financial literacy influences women micro- entrepreneurs' empowerment as suggested by Awuku and Ampah (2022).

Tuffour, Amoaku and Amartey (2020) investigated the impact of managers' financial literacy on the success of small businesses in Ghana. Questionnaires were used to obtain data from 200 managers. Information on financial issues, attitude toward performance standards, financial literacy, and internal and external firm-specific factors were obtained (Koskelainen et al., 2023). The essential variables were assessed using a 5-point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree). The cross-sectional study design was utilized in the investigation. The survey approach was chosen to offer a quantitative explanation of tendencies, approaches, or opinions of small-business directors. To facilitate the analysis, descriptive

statistics were made by applying the SPSS version 21.0, as well as the structural model was estimated utilizing PLS–SEM.

The outcomes demonstrated that financial literacy has a major implication on corporate performance. Furthermore, financial literacy has a considerable favourable impact on business outcomes. Specific qualities (age, education, and experience), on the other hand, have little bearing on financial success, whereas taxation becomes important as a regulatory instrument for small businesses.

According to the findings, financial literacy among small-business owners has a beneficial impact on their business performance. The financial literacy of managers has a beneficial influence on financial performance. Financial literacy among managers has a positive influence on non-financial performance as well. This study ignored financial attitude and financial behaviour which are importance aspects of financial literature as recommended by Kumari et al. (2020). The above gaps, together with some inconsistencies in the findings in the literature, have brought about the first hypotheses of this study.

### **Moderating Role of Social Network in the Relationship amid Financial Literacy and Economic Empowerment**

A theory about how social networking helps people gain power was developed by Ali (2017). The study made a significant effort to present a comparative picture of the various dimensions of empowerment before and after participation in social networking, social business, social investment, and social capital, in addition to social enterprises and social intelligence. Three hundred and twelve women were selected as the study population from a

variety of NGOs, per the analytic unit. In the villages of Hetalbunia and Hatbati, a straightforward random sampling procedure was utilized to collect information from the women who were getting rural credit. Following a straightforward random sampling technique, 350 women were then chosen from the villages, and 312 completed questionnaires were returned to us. The study's techniques included a survey as well as case studies and focus group discussions. From February through April 2016, information was gathered through direct interviews that followed a predetermined interview plan.

The study's findings indicated that social intelligence, social entrepreneurship, social networking, as well as social investment and social capital are all directly associated with women's empowerment. Before participating in social networking, women's conditions were poor, and after participating, family income increased. Following their involvement in social networking, the women began taking part in other income-generating activities. They then began to exert control over savings, credit, outlays, and income. Then, more than previously, they could take part in household decision-making. It was shown that women who participated in social networking began to feel more empowered than they had previously.

Participation in social networking programs increases the rate at which women engage in political and social activities. This study did not consider the role financial literacy together with social networking plays in women economic empowerment. For instance, the social learning theory suggests that the connection amid financial literacy as well as economic empowerment can be strengthened or weakened by the type of social network that people

associate themselves with (Chakraborty & Biswal, 2023). This is one lacuna that this study seeks to fill.

The mediating function of social networks in the connection between financial inclusion and financial intermediation of low-income homes in rural Uganda was investigated by Bongomin et al. (2018). The paper tested whether social networks have a mediating role in the relationship between financial inclusion and financial intermediation using the statistical software for social scientists (SPSS), the MedGraph tool (Excel version 13), the Kenny & Baron guideline, and the Sobel test. Using a cross-sectional research approach, the study addressed the hypotheses expressed in the study. According to the Uganda Bureau of Statistics National Household Survey, 1.2 million underprivileged homes from eastern, northern, western, and central Uganda.

To find disadvantaged homes for the research, a three-stage sampling approach was used. To determine which impoverished homes should be sampled, a multi-stage sampling strategy employing areas, districts, and villages was adopted. According to the UBOS enumeration maps used in the 2014 National Population Census, the sampled impoverished households were located. Then, four communities were chosen using the stratified sampling technique.

A simple random sampling technique was employed to choose the necessary number of impoverished homes from each village after the communities had been identified. For ease of identification, the study's chosen low-income homes were each given a special number. A total sample of 400 impoverished homes in rural Uganda was chosen at random for the study, providing quantitative data. The results showed that social networks have a

small but significant role as a mediator between financial intermediation and impoverished households' access to financial services in rural Uganda.

In addition, social intermediation and financial networks significantly and favourably affect low-income households' financial inclusion in Uganda's rural areas. This suggests that some impacts of financial intermediation on financial inclusion influence the financial inclusion of households in Uganda's rural areas by way of social networks. The study was constrained in that it discarded data gathered from qualitative sources in favour of quantitative information. In addition, while the research was cross-sectional, future research may employ a longitudinal research methodology to offer an in-depth understanding of the factors being examined.

This study found very small mediating role of social network in the connection between financial inclusion and financial intermediation. This may be due to inappropriate deployment of appropriate theories in order to use appropriate variables in the research. This study will therefore apply the three-dimensional model which suggests that intangible resources like culture and social networking can rather play effective moderating role in strengthening the connection between financial literacy and economic empowerment of women (Awuku & Ampah, 2022).

In a study of impoverished households in rural Uganda, Bongomin et al. (2018) looked at whether networks moderate the link between financial inclusion and financial literacy. Financial inclusion levels are impacted by financial literacy, according to studies. The study's participants were chosen from among the low-income rural households in Uganda's Mukono district. A cross-sectional research design was utilized in the study. For this study, a total

sample of 375 low-income homes was chosen at random. To ensure that all households had an equal chance of being involved in the study and received equal opportunity, the poor households were chosen at random. Out of the 375 questionnaires that were sent, 200 were legitimate and useable after being returned from the field, while 175 were disqualified due to improper handling and irresponsible scoring by responders. The findings demonstrated that networks considerably and favourably moderated the connection amid financial inclusion as well as financial literacy, with both factors having large and direct effects.

The research design had limitations for the study. The study did not tell readers if financial inclusion and financial literacy have any role to play in empowering low-income earners like women micro-entrepreneurs. Further studies need to be conducted applying the three-dimensional model, by testing the moderating role of intangible resources like social network in the connection amid financial literacy/financial inclusion and economic empowerment of women micro entrepreneurs. The above gaps, together with some inconsistencies in the findings in the literature, have brought about the second hypotheses of this study.

### **Moderating Role of Patriarchal Culture in the Relationship between Financial Literacy and Economic Empowerment**

Shohel et al. (2021) investigated the connection between patriarchal practices and financial empowerment of female borrowers in Bangladesh. Using qualitative and mixed research approaches, the paper found that patriarchal practices adversely affected access to finance from financial institutions. Shohel et al. (2021) studied how deep-rooted patriarchal practices

affect the financial empowerment of female borrowers in Bangladesh's microfinance sector. They used a mixed-method research design, which combined surveys and in-depth interviews to gather data. This approach allowed them to gather not just numbers but also personal stories, providing a clearer picture of women's experiences as borrowers.

Their comprehensive method enabled the researchers to understand these women's experiences better, giving a broader view of how patriarchal norms affect their financial empowerment. The findings highlighted how long-standing patriarchal practices have impacted microfinance services, often limiting their ability to empower women financially. Although microfinance has potential as a means for women's financial independence, the study showed that deep-seated social norms hinder its effectiveness. As a result, women's financial actions and their ability to fully utilize these services were restricted, presenting a barrier to achieving financial inclusion for women. This study just looked at the direct relationship between patriarchal practices and empowerment of female borrowers. For a study on this topic to yield the desired findings, Jaim (2022) suggests that the patriarchal theory should be deployed as a moderator since it can play an effective moderating role in the relationship between financial literacy and economic empowerment of women. This study will therefore test this hypothesis.

Ferdoos and Zahra (2016) studied how patriarchal family structures affect women's decision-making power, focusing on academia in Islamabad. They used a quantitative approach for their research, providing a clear way to measure how patriarchal norms interact with women's decision-making ability. The study included 120 female university students selected from the

International Islamic University Islamabad (IIUI) and the National University of Modern Languages (NUML). A simple random sampling method from different departments ensured a variety of responses that reflected the broad experiences of these female students. Data was gathered using self-administered questionnaires, often used in quantitative research because they quickly collect a lot of information. The questionnaires were tested with a smaller group first to ensure they were valid and suitable, and then revised to improve their reliability. The findings of Ferdoos and Zahra's (2016) study were notable, showing a strong impact of patriarchal family norms that limited women's decision-making power. Even in an academic environment, these women's freedom and capacity to make decisions were significantly restricted, indicating that patriarchal norms can influence even formal institutions like universities. These findings highlight an alarming reality many women face: deeply rooted patriarchal attitudes within family structures can greatly restrict their personal and financial independence. This situation creates a major barrier to their economic behavior, affecting their participation in and benefits from financial activities, and potentially obstructing their financial inclusion and economic empowerment. This study merely focused on the direct impact of patriarchal practices on the decision making of university students who are not entrepreneurs. So far as this topic is concerned, further studies need to be conducted applying the patriarchal theory, by specifically testing the moderating role of intangible resources like patriarchal culture in the connection amid financial literacy amid women empowerment (Awuku & Ampah, 2022).



Gram et al. (2018) contrast the quantitative method and broaden the discussion of patriarchal norms, focusing on gender dynamics in financial decisions. They investigate how these norms affect household money management across generations. The study took place in the rural areas of Mahottari and Dhanusha in Nepal, revealing how patriarchal norms shape and control women's financial behavior. Their research combined randomized controlled trials with grounded theory to tackle these issues. The trials helped establish clear connections between variables, while grounded theory offered a strong base for developing theories from the collected data.

Data were gathered from 22 women who were currently or recently pregnant, along with their guardians, through semi-structured interviews, and from 20 husbands separately interviewed. This approach ensured various viewpoints across generations, genders, and family roles, allowing for a better understanding of household power dynamics. The results showed that patriarchal norms extend beyond public life, deeply influencing private areas like finances. These norms determined who controls resources, leading to reduced financial independence for women. The study highlights that these patriarchal structures serve as not just external barriers but are also embedded in daily domestic life. The widespread nature of these norms emphasizes the need for specific interventions at the household level to encourage women's financial empowerment. This study used pregnant women without considering women micro-entrepreneurs. Meanwhile, Dewi et al. (2022) argues that women entrepreneurs contribute significantly towards the economic development of every economy, hence scholars should do more research on them order to empower them. Secondly, this paper just looked at the direct

connection between patriarchal practices and financial decision making. Thus, more academic studies need to be done applying the three-dimensional theory, by testing the moderating role of intangible resources like patriarchal culture in the connection amid financial literacy amid women empowerment (Awuku & Ampah, 2022).

Sударso, Keban, and Mas'udah (2019) looked into the harmful effects of patriarchy on women's chances for economic growth. They focused on the widespread educational discrimination against women in the coastal Madurese communities on Madura Island, Indonesia. Using qualitative methods, they collected detailed information through interviews with various participants, such as women who had left school, their parents, teachers, and community leaders. This approach provided thorough narratives and personal stories, giving a clear view of how patriarchal customs affect women's education in these areas.

Their findings revealed the tough reality that entrenched patriarchal ideals in these Madurese communities significantly restrict women's access to education. These limiting customs have formed a situation where women frequently lose their right to learn, which affects their economic prospects and access to financial resources in the future. By showing the connection between education, economic chances, and access to funds, the authors highlighted how patriarchal systems keep gender inequality alive by obstructing women's educational access. Their work stresses the need to break down these patriarchal systems not only to achieve gender equality in education but also to enhance women's financial inclusion and empowerment. This study focused on women in Indonesia who are deprived of educational opportunities as

compared to their male counterparts. This suggests that the findings cannot be general to all countries due to cultural and statutory differences. For instance, in Ghana women are not discriminated against when it comes to education. It must be noted that, though intangible resources like patriarchal culture can play an effective moderating role in the association amid financial literacy as well as economic empowerment as suggested by the three-dimensional theory (Awuku & Ampah, 2022), no study of this nature has been sighted in literature. Besides, the few studies sighted did not consider women micro-entrepreneurs who play a huge role in economic development. The above gaps, together with some inconsistencies in the findings in the literature, have brought about the third hypotheses of this investigation:

### **Effect of Financial Inclusion on Economic Empowerment**

Financial inclusion refers to the extent to which people and businesses gain access to affordable financial services which is expected to improve their standard of living. (Aziz et al., 2022). Pal, Gupta, and Joshi (2022) investigated the effects of economic and social factors on the economic empowerment of women through financial inclusion. The study used a primary survey of women participants from the state of Gujarat in India using a simple random sampling procedure to reveal the research objective. It then used a logistic regression method to find the connection between the necessity for a bank account (a determining factor of financial inclusion) as an endogenous variable, and economic and social magnitudes of empowerment of women like gaining status, involvement in making financial decisions, and beneficiary of social welfare.

The number of women in rural Gujarat is the approximate target population for the study (Census of India, 2011). The study's findings indicated that women's financial inclusion has a major impact on their ability to empower themselves. However, the safety of their savings is seen as a negligible variable. The research is the first of its type to look at how women's social and economic standing affects their need for an official bank account for general female empowerment in rural India.

The study is constrained because it is based mainly on two main empowerment factors: economic and social facets, which are very applicable to any other part of the nation that influences the financial inclusion of women in rural Gujarat. An important gap spotted in this study is that, financial inclusion (FI) was operationalised as women who have bank account. In modern times, people do not necessarily need to have bank account as condition for accessing financial services. Other important aspects of financial inclusion like access and usage of mobile money services have greater impact on women economic empowerment than having a bank account (Kim, 2022). This gap will be filled in this study by including access and usage of mobile money services in the definition of financial inclusion.

The extent of women's financial inclusion in built-up slums and how it empowers them were explored by Bhatia and Singh (2019). To be more specific, the study examines the current state of the Government of India's financial inclusion initiatives for women in the business city of Ludhiana in India, and how it might influence women. The research was done from January through August of 2018. In total, Ludhiana has 218 slum areas.

The sample was made up of urban slum dwellers. Women who owned PMJDY bank accounts were eligible to participate in the poll, and respondents were chosen at random. This confirmed that respondents were qualified to enrol in financial inclusion programs. A total of 1,000 respondents were contacted, and 737 of them provided thoughtful comments (73 percent response rate). Confirmatory and exploratory factor analyses were used on the data to identify and validate the constructs. Additionally, ANOVA was utilized to evaluate the hypothesis.

The research revealed that most women were conscious of PMSBY and that this program had a higher rate of subscriptions. Additionally, it was discovered that Ludhiana's slum residents had very little general knowledge of and financial literacy for accidental insurance, life insurance, and pensions. Further research revealed that only 6% of slum dweller women were able to use mobile banking services, compared to 35% who could check their account balance and 40% who could fill out the bank account opening form.

This study has a serious limitation because having a bank account is the sole criteria of being financially included. In contemporary times, financial inclusion goes beyond a mere bank account. People who do not have bank accounts but engage in continuous usage of mobile money transactions are more financially included than those who just use bank accounts (Kim, 2022). This gap will be filled in this study by including access and usage of mobile money services in the definition of financial inclusion.

In a Sri Lankan setting, Kumari and Azam (2019) looked into the mediating role of financial inclusion in the relationship between financial literacy and women's economic empowerment. The study's conceptual

framework and hypotheses were constructed based on a strong theoretical and literary background, and it was designed using a deductive technique under the positivist research paradigm. The study's sample was chosen from rural poor women who earn less than the national poverty level of Rs. 4,677 and come from nine different areas in Sri Lanka.

For sample size, a total of 426 rural poor women were chosen, and information was gathered via a questionnaire that was administered. Additionally, the sample was chosen using the multilevel mixed sampling approach, and the rural homes with a woman as the head of household served as the unit of analysis. Additionally, the PLS-SEM was utilized as the primary strategy to analyse the data, and Smart-PLS 3 was used as the primary analytical software. The results showed that financial literacy significantly impacted women's economic empowerment and that this benefit was amplified by the mediation effect of financial inclusion among Sri Lanka's rural poor women. The scope of the current study is restricted to economic empowerment because of measuring concerns with these variables.

Kumari (2020) offered a comprehensive review of the causes and effects of women's economic empowerment. The study identified five key factors that influence women's economic empowerment. This includes control over how money is spent and earned, decision-making ability, leadership in the community, financial security and control over time management. Among all the effects, inclusive growth stood out as the primary effect. Policymakers can use the compilation of factors that influence women's economic empowerment to help them decide which factors are most important in advancing this empowerment and to create new economic plans that will help

them achieve inclusive growth, which is one of the main effects of the economic empowerment of women.

The unanticipated impact of microfinance on women's empowerment in Ghana was studied by Salia et al. (2018). The study uses a participatory mixed-method approach to examine the dynamics of microfinance impacts on women in societies with various levels of susceptibility in Ghana. This includes household questionnaire surveys, focus group discussions, and key informant interviews. The study uses a cross-sectional quantitative data survey analysis on a sample of 1,200 chosen microbusinesses in Ghana that are owned and operated by women. Based on early focus group talks and pilot surveys, the main study questionnaire was created.

The final questionnaire had three segments: family and personal information, quantitative data utilising the Likert scale, and semi-structured questions once the pre-tests and final review were completed. A sample of 1,200 microbusinesses were contacted, yielding 264 valid responses in total, a response rate of 22% that is favorable when compared to other research of a similar nature. The findings of hierarchical regression, thematic analyses, and triadic closure show that the advantages of microfinance for women in economic terms are also closely related to domestic disputes, the use of young girls as laborers, polygyny, and the disregard of responsibilities of women at home as a result of women's commitment to their businesses. A larger sample with a cross-country or cultural context that portrays the unplanned effects of microfinance initiatives aimed at women is lacking.

The main shortcoming of this study is that the aforementioned conclusions only apply to female microloan beneficiaries in Ghana. This study

focused on women who receive small loans from micro-loan institutions and how this affected their empowerment. The empowerment theory however, proposes other ways through which people can be empowered apart from have access to loans (Hegar, 2012). This includes acquisition of relevant skills and boosting of confidence. For instance, a person can have easy access to numerous resources but will not be adequately empowered if he has low self-confidence as well as insufficient skills (Aziz, 2022). To fill this gap, this study will expand the financial inclusion variable by looking at the quality aspect of financial inclusion.

Benchmarking was utilised by Goel and Madan (2019) to evaluate financial inclusion programs for women entrepreneurs. Women entrepreneurs represent the balanced development of society. The government's financial inclusion programs aim to inspire many of the nation's women to start their businesses. The goal of the article is to examine how financial inclusion and other factors, such as a woman's family situation, benchmarking, entrepreneurial drive, and intention, affect her decision to pursue entrepreneurship as a choice of career. The study was conducted to establish a cause-and-effect relationship between financial inclusion programs and women's entrepreneurship.

Women's entrepreneurship is a dependent variable in this situation, whereas the endeavour to promote financial inclusion is an exogenous variable. Two hundred and fifty (250) female business owners were used as the sample size. Convenience played a role in the selection of the sample. Out of the entire sample, 125 women belonged to a self-help organization and 125



women were enrolled with lead banks in the Indian state of Uttarakhand's Haridwar and Dehradun districts.

According to the study's findings, financial inclusion has a statistically significant impact on women's entrepreneurship. It gives women a platform that aids them in starting a new enterprise. Data for the current study were gathered from two Uttarakhand districts. In the future, data can be gathered from many Indian regions to help generalize the study's conclusions. The study's findings reveal that financial inclusion has a statistically significant effect on women's entrepreneurship. It gives women a platform that aids them in starting a new enterprise. This current study will go beyond this scope by applying the empowerment theory to find out if access to bank and mobile money services will improve the standard of living of women micro-entrepreneurs as recommended by Mishra et al. (2022) in terms of providing for their financial well-being. The above gaps, together with some inconsistencies in the findings in the literature, have brought about the fourth hypotheses of this study.

### **Moderating Role of Patriarchal Culture in the Relationship amid Financial Inclusion and Economic Empowerment**

Rawat (2014) argues that women's empowerment is linked to the patriarchate's concept and Eve's empowerment is the manner of upending patriarchal thought and practice. This research makes a distinction between psychological and eve empowerment. The former (eve empowerment) is a social construct, while the second one (psychological empowerment) is a psychological concept. Psychological empowerment happens when a woman undergoes empowerment as a consequence of circumstances favouring

women's empowerment. Both variables are associated with common well-being, which is identified as a condition that enables people to achieve their potential, cope with daily challenges, work productively and productively, and give back to their societies.

Questionnaires were used to gather information about eve empowerment (countering patriarchy), psychological empowerment at work and home, and general well-being measures. A total of 289 replies to the survey were solicited from working women. There were 176 married women and 113 single women in the group. The sample involved 270 women with graduate and post-graduate degrees and 19 women with a high school diploma. There were 194 nuclear families and 95 joint families among them. Husband and wife homes were categorized as a nuclear family (with or without children). The term "joint family" was used to describe families that included a husband and wife, as well as in-law parents, uncles, and aunts, and children.

The data was analysed with the help of the SPSS (version 24). The findings show that women get more eve empowerment and psychological empowerment when patriarchy is challenged. The findings also reveal that a woman's level of education has little bearing on her empowerment. This is because even amongst the knowledgeable middle and top levels of society, there are women who lack empowerment. Empowerment at work and home appears to have a spillover impact since both appear to mitigate the relationship between personal empowerment and overall happiness. The study's shortcoming was that it was conducted in a strong pervasive patriarchal environment.

The implication of the above finding is that, women do not have much influence in society so no matter their level of educational advancement, they cannot be empowered. This finding cannot be generalized due to differences in the culture that prevails in different countries. It is also possible that inappropriate variables were used, hence the findings. For instance, the three-dimensional theory suggests that intangible resources like patriarchy can play effective moderating role in the relationship between financial inclusion and women empowerment (Awuku & Ampah, 2022). This study will apply this theory by using patriarchal culture as a moderating variable in the relationship amid financial inclusion and economic empowerment of women.

In a non-Western environment, Adisa et al. (2019) studied the effect of the patriarchy on the work-life balance of women in Nigeria. To gain a better understanding of the patriarchal and women's work-life balance, the authors utilised a qualitative study methodology. The study's data was collected in four months, with semi-structured interviews acting as the main technique of the data collection. Participants were contacted through email through the researchers' existing relationships. Out of the 62 emails sent to potential volunteers, 41 expressed an interest in participating in the study, and 32 did so.

First and foremost, the participants had to be employed full-time. Second, they had to be married or cohabitating with their spouses. Third, the participants were expected to have personal commitments, such as familial and caregiving obligations. The women in the sample worked at all levels of the bank's structure (15 in various management roles and 17 in junior ones), and the sample was entirely made up of women. The respondents oscillated in age from 22 to 40 and had an average of six years of job experience.

The results of the thematic analysis show how patriarchy affects the work-life balance of women in Sub-Saharan Africa, particularly Nigeria. In this region of the world, patriarchal standards, which are strongly embedded in the culture, frequently hinder women's efforts to achieve work-life balance. Paternalistic culture is defined by male domination and excessive subjection of women, household and gender-based division of labour, and stronger paternalistic tendencies among men, according to the study's findings.

These challenges make it harder for women to strike a work-life balance. Because of the small sample size and the specific research environment, the results of the study can only be generalized to a limited extent. The findings imply that due to the persistent patriarchate and paternalistic principles within society, women in the global south, notably in Nigeria, still face considerable issues in achieving work-life balance. The work-life balance of women is negatively impacted by patriarchal norms and attitudes, which could impede worker productivity, organizational efficiency, employee performance, and punctuality.

One lacuna identified in this study is that this study focused only on married female employees in Nigeria and how the patriarchal practices in their society affected their domestic chores. Since women contribute immensely to the economic development of their respective economies, there is the need for a study that will focus on economic empowerment of women who do their own business on a micro level. In this study, the three-dimensional theory will be tested by deploying patriarchal culture as a moderating variable in the connection between financial inclusion and women empowerment (Awuku & Ampah, 2022).

Jenyo (2020) investigates the intellectual and material foundations of the Nigerian patriarchy and gender inequality. It examines a variety of societal, economic, and political issues that contribute to gender inequality and discrimination in various forms. Limited access to comprehensive educational and leadership development programs for women; excessive male domination in the socio-political arena, including inequities in political appointments; and destitution, according to this study, induce the underrepresentation of women in Nigerian society and seriously jeopardize the country's efforts to consolidate its democracy and achieve sustainable development. This study merely looks at reasons why women are discriminated against in Nigeria and recommends policy shift that will help empower women across the globe.

It must be noted that only few studies looked at the direct relationship between financial inclusion and economic empowerment (Aziz et al., 2022; Kim et al., 2022) or between patriarchal culture and economic empowerment (Adisa et al., 2019; Jenyo, 2020). However, studies have not been sighted on the moderating role of patriarchal culture in the connection amid financial inclusion and economic empowerment as suggested by the patriarchal theory. This study will focus on women micro-entrepreneurs in Ghana as the unit of analysis and test the moderating role of patriarchal culture in weakening the connection amid financial inclusion and empowerment. The above gaps that have been established in literature, have brought about the fifth hypotheses of this study.

### **Moderating Role of Social network in the Relationship between Financial Inclusion and Economic Empowerment**

According to the social learning theory (Bandura, 1977), individuals through social interactions can easily learn through observation and imitation. This suggests that women micro-entrepreneurs who belong to useful associations can learn good business skills from members and this can empower them in terms quality financial decisions as well as taking leadership roles in society. Awuku and Ampah (2022) suggests that for the connection between financial inclusion and economic empowerment to be significant intangible resources like social networking must play a crucial moderating role. This argument is supported by the three-dimensional theory (Kabeer, 1999).

Okello et al. (2018) looked at how mobile money and financial access relate in rural Uganda. Their goal was to see not just how mobile money affected people, but also how social networks could change this effect. They used a cross-sectional method and created a semi-structured questionnaire to gather data from 400 household heads, chosen using Yamane's formula.

Though this sample was small, it aimed to reflect the 1.2 million poor households in rural Uganda. Social networks, often just seen as connections, turned out to be essential in the economy of rural Uganda. These networks, which included both strong and weak ties, helped with direct financial access and made the benefits of mobile money usage even greater. This conclusion, while based on the Ugandan context, suggests interesting possibilities for combining technology and community connections in other developing countries.

One limitation that has been identified with this paper is the inappropriate relationships among the study variables. For instance, the study found that social network plays a significant positive moderating role in the connection amid financial inclusion and the extent of mobile money usage. However, mobile money is an integral part of financial inclusion. It is worthy to note that, ability to use mobile money services is an indication of financial inclusion. Therefore, using social network theory, the study included mobile money in the dimensions of financial inclusion to explain how social network strengthens economic empowerment of women micro-entrepreneurs if intangible resource like social network plays a moderating role.

Anyanwu et al. (2023) did a study on the pivotal measures that can enhance women's empowerment. They used surveys as their method, given to different parts of the city. Three hundred ninety-two people joined in, representing the hopes and opinions of many others, creating a clear picture. The study found that most women utilized social media to start their own businesses, thus gaining economic power. The online world, through social media, was not only raising new issues but also providing new solutions for women's empowerment. Still, the problems that businesses face, especially during global crises, need a special way of looking at things. In the business world, the disruptions caused by the COVID-19 pandemic have affected many, especially women-owned small businesses in Spain.

This is a very useful study which concludes that women can leverage on the positive information available on social media platforms to establish their own businesses and this can empower them financially. The study however did not look at the moderating role played by these social network

platforms in strengthening the connection amid financial inclusion and economic empowerment of women.

Jiménez-Zarco et al. (2021) looked at how digital transformation could help. They talked to women entrepreneurs using online surveys, showing a promising view: social media marketing, if used right, could improve financial results, serving as a beacon of hope in difficult times. Social media marketing, previously thought of as merely one more marketing option, turned out to be an important factor influencing the financial success of these small businesses. Though the finding of this study encourages small and medium enterprises to use social media platforms to promote the goods they sell in order to boost the financial performance, the study did not cover women micro-entrepreneurs who also play significant roles in every community in economic development.

The study also did not look at the moderating role social network plays in the connection amid financial inclusion and empowerment of women micro-entrepreneurs as suggested by the social network theory. This study will focus on women micro-entrepreneurs in Ghana as the unit of analysis. The above gaps that have been established in literature, have brought about the specification of the sixth hypotheses of this study.

### **Deduction from previous studies**

The review of literature provided useful insight on economic empowerment of women micro-entrepreneurs. It emerged that extant literature on economic empowerment has been focused on rural poor women, women living in slums, women facing male violence and women in agriculture. This point to the importance of alleviating poverty of women. However, this study focused on women micro-entrepreneurs as unit of analysis. In most cases



studies on women economic empowerment were under different contexts in non-African countries having varying social culture environment (Kumari et al., 2020; Jiménez-Zarco et al., 2021).

Also, studies on financial literacy mostly involve financial knowledge, financial behaviour and financial attitude, excluding financial awareness and skills. Lessons from the study also reveal that financial literacy contributes to financial performance of Small and Medium Enterprise (SMEs). It emerged from previous studies that financial inclusion provided enormous contribution to women's economic empowerment. However, the financial inclusion was not classified into access, usage and quality.

Again, it became evident that majority of the studies on women economic empowerment was qualitative in nature, employing non-probability sampling techniques. This has been so because of the difficulty in getting sampling frame from the population as majority of these women are in the informal sector. Moreover, it was discovered that few studies looked at the direct relationship between financial inclusion and economic empowerment (Aziz et al., 2022; Kim et al., 2022) or financial literacy and economic empowerment (Adisa et al., 2019; Jenyo, 2020), neglecting the moderating role of patriarchal culture and social network in the connection amid financial inclusion and economic empowerment.

### **Conceptual Framework**

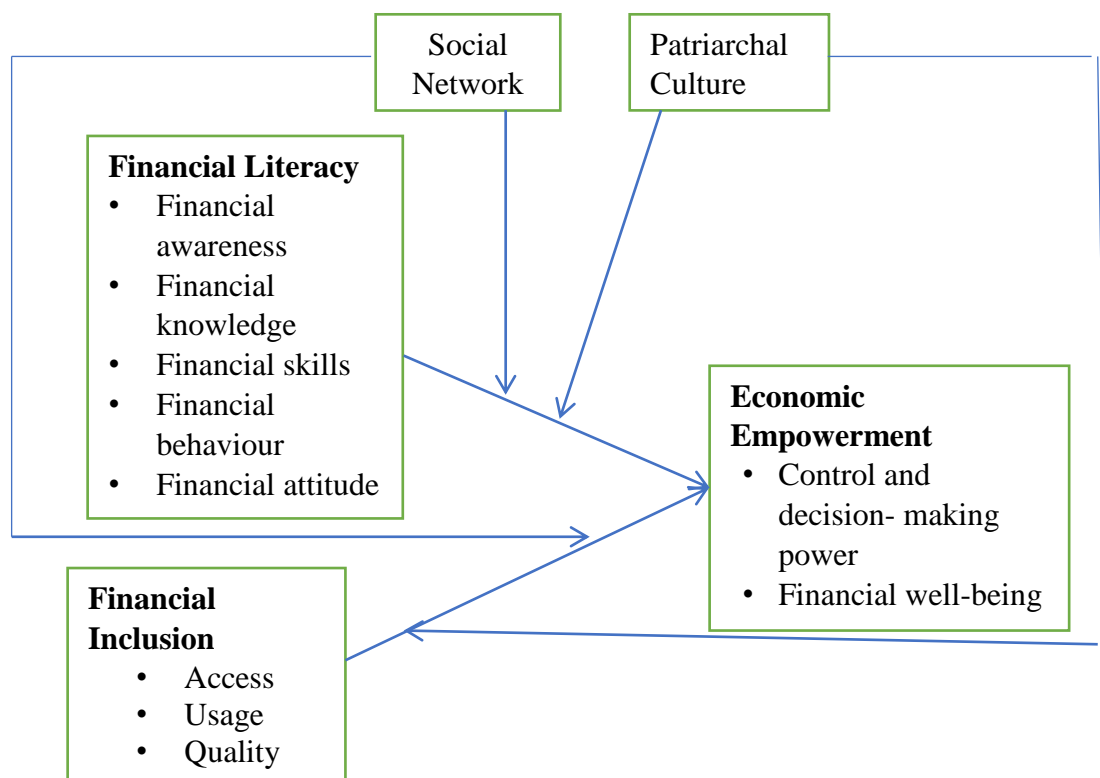
The conceptual framework for this study depicts the relationship between the variables employed, which are premised on available theories and literature. The framework portrays the independent variables and the dependent variables anchored on five theories which are: empowerment theory

(Rappaport, 1981), Kabeer's three-dimensional model (Kabeer, 1999), attribution theory (Heider, 1958), social network theory (Casson & Giusta, 2007), social learning theory (Bandura, 1977) and the patriarchal theory (Lim, 1997).

As indicated in Figure 1, the financial literacy variables are financial awareness, financial knowledge, financial skills, financial attitude and financial behaviour. Financial inclusion is also made up of access, usage and quality. Economic empowerment is measured using control and, decision-making power, and financial well-being. The conceptual framework indicates that financial literacy and financial inclusion influence economic empowerment. Social network moderates the relationship between financial literacy and economic empowerment. Also, it moderates the relationship amid financial inclusion and economic empowerment. Patriarchal culture moderates the relationship between financial inclusion and economic empowerment and the relationship between financial literacy and economic empowerment.

Empowerment theory, attribution theory and Kabeer's three-dimensional model were employed to explain how financial literacy and financial inclusion influenced economic empowerment. The relationship between financial literacy and economic empowerment, as well as the relationship between financial inclusion and economic empowerment, were moderated by social network theory and patriarchal culture. Social network, with the support of social learning theory, was employed to support the moderating role of social network. Patriarchal theory was used to moderate the relationship between financial inclusion and economic empowerment, as well as the relationship between financial literacy and economic empowerment.

Apart from relevant theories, empirical literature also suggests a linkage between financial literacy, financial inclusion and economic empowerment. According to Koomson, Villano and Hadley (2021) and Kumari (2019), there is a positive relationship between financial literacy and economic empowerment. Similarly, Agyei et al. (2019) and Adam et al. (2017) indicated that financial literacy positively influences financial well-being.



*Figure 1: Conceptual Framework*  
Source: Author's Construct (2023)

## Chapter Summary

This section presented a review of relevant theoretical, conceptual and empirical literature in the study. The theoretical literature provided a connection among the constructs used in formulating the objectives, and because of that, this chapter indicated how useful the theories are in the relationship between one construct and the other. It further provided the

criticisms of the theories. The theories examined in this chapter are empowerment theory, patriarchal theory, social learning theory, attribution theory, social network theory and Kabeer's three-dimensional model. The study deals with conceptual and empirical literature on financial literacy, financial inclusion, economic empowerment and, social networks and patriarchal culture. It also provided and explained the conceptual framework for the study needed in the conceptual framework.

## **CHAPTER THREE**

### **RESEARCH METHODS**

#### **Introduction**

In this chapter, the methodology used to address the research objectives and hypothesis are elaborated. The research methodology provides the general plan based on which the research is carried out (Saunders et al., 2013). The research methodology comprises among others the research philosophy, research design, study design, the study area, target population, sampling technique, data collection procedure, common method variance, research instrument and data analysis procedure. It is followed by discussions on pre-testing, validity and reliability and ethical considerations. Finally, the Partial Least Square Structural Equation Model (PLS-SEM) used in the data analysis was thoroughly discussed.

#### **Research Philosophy**

The philosophical stance of the researcher normally shapes the methodology employed in the research (Isomidinova & Singh, 2017). Saunders et al. (2016) identified three major research philosophies namely Positivism, Interpretivism as well as Pragmatism. However, over the years there has been extension to these three philosophies that have been used by researchers. This extension involves post-positivism, critical realism and postmodernism. The choice of any of these philosophies depends on the anthology, epistemology and axiology assumptions underpinning the research.

The study is premised on positivist research philosophy, which involves the scientific method to produce knowledge. The choice of positivism is based on its objective and scientific way of gathering and measuring data.

One of the research objectives was to examine the relationship between financial literacy and economic empowerment. Another research objective was to examine the moderating role of social network in the relationship between financial literacy and economic empowerment. To achieve all the objectives, primary data in the form of questionnaires was collected from women micro-entrepreneurs. Since the data was collected directly from the respondents, factual information was obtained for the analysis. Consequently, conclusions were drawn based on deductive reasoning.

Again, the adoption of positivist research philosophy is justified because the study involves testing the research hypotheses based on theories to draw conclusions. For example, one of the research hypotheses was “financial literacy positively influences economic empowerment”. Data gathered scientifically was analysed using scientific method such as PLS- SEM which provided the information on significance of hypotheses. Drawing on the sig using hypothesis, conclusions were drawn to establish a law-like generalisation of the study findings, making the use of positivist philosophy more appropriate.

### **Research Design**

A cross-sectional research design was adopted for the study. This involves collection of data at a point in time from women micro-entrepreneurs at different locations in Accra Metropolitan Area. To examine the effect of financial literacy and financial inclusion on economic empowerment, data was collected from women micro entrepreneurs at a point in time across the metropolis. Once the respondents for the study were selected, data was collected and association between variables was assessed to make inferences

from the analysis. This made the use of cross-sectional research design more appropriate. According to Kesmodel (2018), there are two types of cross-sectional studies: descriptive and analytical. Also, Bell, Bryman and Harley (2022) identified cross-sectional research design as another research design. Considering the time frame for the completion of this study, the cross-sectional design is suitable as it can be performed quickly and is relatively less expensive. It also provides a snapshot of the phenomena being studied.

The researcher used a reliable measurement scale in collecting data to permit quantitative analysis and inferences. The cross-sectional design permits deductive reasoning to test hypothesis based on theories. A cross-sectional design was useful in making statistical explanations and inferences about the variables used in the study (Wang & Cheng, 2020). The cross-sectional design hinges on the causality of relationships and their effects and is pre-planned, structured and quantitative (Asad et al., 2022). It explains what causes a variable to behave in a certain way and the effect that a variable has on another variable.

### **Research Approach**

Any research philosophy adopted inclines towards a research approach. The research approach adopted for the study should reflect the research philosophy employed (Fetters et al., 2013). According to Creswell and Creswell (2017), there are three research approaches, namely, quantitative, qualitative and mixed methods. Based on the positivist philosophical approach, the quantitative research approach is adopted for this study. The quantitative approach is justified because it permits deductive reasoning, formulation and testing of hypotheses drawn from theories and

empirical literature. The study examined the effect of financial literacy and financial inclusion on the economic empowerment of women micro-entrepreneurs, given certain moderators. This makes the choice of quantitative approach more appropriate.

Considering the objectives of the study that sought to examine the effect of financial literacy and financial inclusion on economic empowerment, there was the need to gather data that was scientifically measurable to permit deductive analysis and hypothesis testing. In examining the moderating role of patriarchal culture on the relationship between financial inclusion and economic empowerment, for example, a value-free study was approached. This means that the responses from the respondents were not influenced by the researcher resulting in a high degree of reliability.

Compared to the qualitative approach, the quantitative research approach measures observable reality scientifically and is free from researcher interference thereby creating a value-free study. The quantitative research approach is appropriate since this study involves a causal relationship among financial literacy, inclusion, social network, patriarchal culture and economic empowerment and drawing conclusions on them.

### **Study Area**

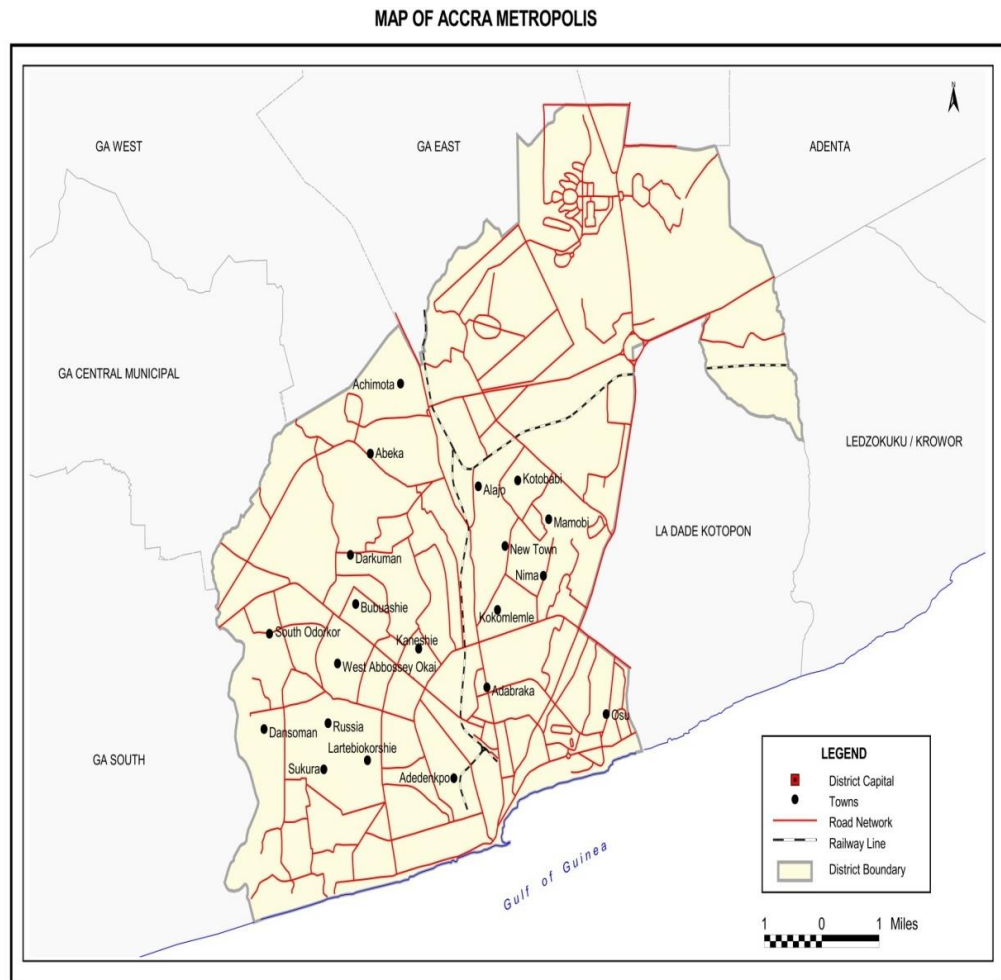
The study area of the research is Accra Metropolis which has been the regional capital in the Greater Accra Region of Ghana since 1898. Also, it serves as the national capital of Ghana (GSS, IBES, 2014). The establishment is legally enshrined in the Local Government Act 1993 (Act 462) as amended by the Local Government Act 2016 (Act 936) and LI (2034). According to



GSS, 2021 population and housing census, Accra Metropolis is among the twenty-nine (29) MMDAs in Greater Accra.

The District Analytical Report of the 2021 population and Housing Census indicates that the Metropolis has a total land area of 199.4 km<sup>2</sup> and shares borders with Ga West Municipal in the north, Gulf of Guinea in the south, Ga South Municipal in the west and La Dadekotopon Municipal in the east. According to the Ghana Population and Housing Census (2021), the Metropolis has three sub-Metros (Ablekuma South, Ashiedu Keteke and Okaikoi South) and included in the communities are Korle Gonno, Korlebu, Chorko, Mamprobi, Dansoman, Ngleshie, James Town, Tudu, Okaishie, Bubuashie, and Kaneshie.

Inhabited by people of different cultural backgrounds and being a cosmopolitan area, the Gas are believed to be the indigenous people of Accra. The map of the Accra metropolis is found on the next page.



*Figure 2: Map of Accra Metropolis*

Source: Ghana Statistical Service (GSS, 2014)

Being the hub of economic activities in the Greater Accra Region and the Country, Metropolis hosts the head offices of several establishments including manufacturing companies, telecommunication firms, financial institutions as well as oil companies. It is the hub of commercial activities in the Greater Accra region and attract many people from various parts of the country to transact business making the place one of the busiest areas in the country.

The study examined the effect of financial literacy and financial inclusion on economic empowerment of women micro-entrepreneurs and Accra Metropolis harbours many women micro-entrepreneurs including

women in squatter settlement (Quagrainie et al., 2021). These women micro-entrepreneurs have social cultural challenges involving household responsibilities, hindering their business growth (Tuffour et al., 2022). The consequence is that their economic empowerment is stifled with majority of them being impoverished (Afenyo-Agbe et al., 2021).

The choice of Accra Metropolis for the study is based on the size of micro establishments in the Greater Accra Region. In 2014, out of the 148,727 micro establishments in the Greater Accra region, Accra Metropolis had 65,771 micro business establishments representing 44.2% (GSS IBES, 2014). IBES 2014 and IBES 2016 are the only source of statistical data on the population of micro-entrepreneurship in Ghana. The current IBES 2023 is yet to be published. The large number of micro-entrepreneurs coupled with a higher proportion of females makes the metropolis an ideal location for the study.

### **Population**

The target population of this investigation is made up of female owners of Micro-enterprises in the Accra. As stated in the National Micro, Small and Medium Enterprises (NMSMEs) Policy (2019), Ghana still has a challenge of inadequate data on MSMEs. Therefore, the data provided in IBES (2014) was the major source of data for the population of the study.

Integrated Business Establishment Survey (IBES), prepared by Ghana Statistical Service is an economic census covering all the major sectors of the Ghanaian economy. The IBES 2014 is the third economic census after 1987 and 2003 and it covers all sectors, providing information on non-household establishments. It provides a comprehensive analysis of business

establishment (Micro, small, medium and large enterprises), providing information on the number of persons engaged in these establishments in all districts. Even though, IBES 2016 deals with business establishment, it is not a detailed economic census that covers MSMEs. Since the publication of IBES 2014, there has not been any publication providing current information on the number of persons engaged in micro entrepreneurship. The current IBES 2024 which seeks to provide comprehensive information on all establishment across all sectors is yet to be published, hence the use of IBES 2014.

According to IBES (2014), the number of micro-enterprises in the Metropolis is 65,771. This is made up of female and male micro-entrepreneurs. Even though the report did not state the percentage of female micro-entrepreneurs, the Ghana Population and Housing Census (2021), indicates that 52.8% of economically active persons in the Accra Metropolis is made up of women. Therefore, it can be estimated that the target population is 34,727 which is  $(52.8\% \times 65,771)$ . Even though there has been growth in population over the period this does not affect the sample size significantly.

Most women entrepreneurs operate micro, small and medium-sized enterprises and they constitute more than 50% of owners of small and medium-sized enterprises in Ghana (Agyei et al., 2019). The justification for choosing the Accra Metropolis is based on the fact that it has the largest number of micro-entrepreneurs in the Greater Accra Region and by extension the whole of Ghana (IBES, 2014). Women micro-entrepreneurs are bedevilled with several challenges, particularly a lack of empowerment affecting their control, decision-making and financial well-being (Crittenden et al., 2019). According to Afenyo-Agbe et al. (2021) majority of women micro-

entrepreneurs in the Metropolis have several challenges resulting in their inability to grow their businesses and enhance their economic empowerment. GSS IBES (2014) does not constitute the sample frame because current list of women micro entrepreneurs is not available.

### **Sampling procedure**

The primary sampling unit is women micro entrepreneurs in the Accra Metropolis. The GSS IBES 2014 contains the population of women micro-entrepreneurs, but until the IBES 2023 is published, the current population figure can't be obtained. Quantitative data was collected for the study. Convenient sampling was adopted for the study because it was a challenge to attain the sampling frame. However, Anderson et al. (2022, p. 325) provided guidelines for the adoption of convenience technique in dealing with quantitative data. According to Anderson et al. (2022, p. 325) when there is no sampling frame, random sample can be achieved if the sample selected can meet the following conditions:

- a. Each element selected comes from the same population
- b. Each element is selected independently

According to Fowler Jr. (2014), the technique is appropriate in generating a representative sample when it is difficult obtaining a sampling frame due to the large size and dispersed nature of the population. Considering the dispersed nature of women micro-entrepreneurs in the Metropolis, this technique is deemed appropriate because women micro entrepreneurs are scattered in the three sub metros. One major advantage of this technique is that it does not require a sampling frame containing the list of all the elements. All

that is needed is to choose clusters from a predetermined or existing groups from which the respondents are selected.

The Ghana Population and Housing Census (2021), indicated that the total number of females in Ablekuma South, Ashiedu Keteke as well as Okaikoi South are 58,276 (39%), 48,210 (32%) and 43,593 (29%) respectively. Questionnaires were administered to 480 respondents selected from all the three sub metros using the above percentages. The 480 questionnaires were considered after taking into consideration the non-response rate normally associated with survey instruments. The 480 questionnaires were administered in Ablekuma South, Ashiedu Keteke as well as Okaikoi South sub metros in the proportion of 39 percent, 32 percent and 29 percent. Yamane (1967) sampling determination formula adjusted by Adam (2020) was adopted and 380 was obtained as the sample size.

### **Data Collection Instrument**

The research instrument used for the investigation is a questionnaire. A questionnaire is appropriate for the study as it is capable of eliciting primary information from the respondents. According to Saunders et al. (2013), it is suitable to use a questionnaire for explanatory study since it helps examine and explain the relationships of variables. Respondents who could read and write were given the questionnaires to fill. However, those who could not read and write were assisted by research field assistants.

The questionnaire, as indicated in Appendix A, is structured into six major headings covering all the objectives. The headings begin with biographic data in section A and continue with financial literacy in section B, Financial inclusion in section C, Economic empowerment in section D, Social

network in section E and Patriarchal culture in section F. Apart from social network and patriarchal culture, which do not have subheadings, financial literacy, financial inclusion and economic empowerment have subheadings.

Financial literacy, financial inclusion and economic empowerment are the three major constructs in the questionnaire. Social networks and patriarchal practices are the moderating variables used in the major constructs of the relationship. In measuring the variables in the instruments, current item scales that have been developed, validated and used by (Adam et al. 2017; Agyei et al. 2019; Kumari et al. 2020; Lusardi 2019) were adopted. The measurement is based on seven-point Likert scale of 1 to 7, with 1 indicating least agree and 7 denoting strongly agree.

The justification for the use of the seven-point Likert scale is that it allows respondents to make choices from wider options that allow reliability to be maximized (Taherdoost, 2019). It also ensures that the respondent makes a definite choice and can reduce response bias (Simms et al., 2019). However, according to Taherdoost (2019), the tendency of respondents choosing the middle option leading to a clustering of responses around the centre is a limitation. Also, the increased number of options sometimes results in survey fatigue leading to less thoughtful responses.

Financial literacy construct has five dimensions: financial awareness (FAW), financial knowledge (FKN), financial skills (FSK), financial behaviour (FBH) and financial attitude (FAT). Questionnaire items on FAW were adapted from an instrument developed by (Kumari et al., 2020), which was based on the guidelines stipulated in the OECD/ INFE toolkits. The questionnaire items have earlier been used by other researchers (Agarwal,

2014; Bhushan & Medury, 2014). Items in FSK were also adapted from the works of Arora and Ali (2012) and Morgan and Long (2020). Others like Rai et al. (2019) and Kumar et al. (2023). also employed these items scale in their scholarly works.

Items from the financial literacy toolkit developed by OECD/INFE 2013 and OECD/INFE 2017 which provide guidelines for instrument development, were also adapted for FBH, FAT and FKN. Questionnaire items on FBH, FAT and FKN used by scholars (Adam et al., 2017; Arora, 2016; Lusardi, 2019) were adopted. The instrument developed by Kumari et al. (2020) was also modified to suit the items in financial literacy concerning women owners of Micro-enterprises.

There are three variables in financial inclusion: access (ACC), usage (USA) and quality (QUAL). The dimensions used to measure these variables were adapted from scholarly works that have been referenced internationally (Demirguc Kunt & Klapper, 2013; Izquierdo & Tuesta, 2015, Global Financial Inclusion Database, 2019; Jones et al., 2013). Also, items from these instruments were used by Singh and Stakic (2021) in their study on the financial inclusion of female sex workers in India. Control and decision-making power (CDMP) and financial well-being (FWB) dimensions were enshrined in the scholarly work of Kumari et al. (2020) and have been adapted in the questionnaire for this study. Singh and Stakic (2021) also used some of these dimensions in their work. This work was published with a Cronbach's alpha for economic empowerment of 0.922

The scale items for CDMP were adapted from the instrument developed by Kumari et al. (2020), which was similar to the instrument



developed by Alkire et al. (2012). Scholars in the like of Singh et al. (2017), Lusardi and Olivia (2018) and Roy and Jain, (2018) also employed them successfully in their publications. In developing the questionnaire for FWB, questionnaire items were adapted from financial well-being scale items with a composite reliability (CR) of 0.95. In developing the instrument for Social Networks (SN), scale items from a validated instrument developed by Bongomin et al., (2018) were adopted. This instrument had a reliability score of 0.739, which indicates a strong consistency in the questionnaire items.

Another moderating variable used in the study is Patriarchal Culture (PATC). Items for developing patriarchal questionnaires were adapted from the work of scholars who have contributed to patriarchal discourse and women empowerment (Quagraine, 2018; Gyan et al., 2020; Quagraine et al., 2021). In all, eighty-six (86) questions comprising financial literacy (27), financial inclusion (30), economic empowerment (14), social network (9) and patriarchal culture (6) were used.

### **Operationalisation of Variables**

The variables used in the study have been operationalised in the table below. For the financial literacy construct, the following variables are used: financial awareness, financial knowledge, financial skills, financial behaviour, and financial attitude. For financial inclusion, access, usage and quality are operationalised. For economic empowerment, the variables used are Control and, decision-making power, and financial well-being. Social networks and patriarchal culture are other variables employed. The table also indicates how these variables are measured and the questions used in measuring them

**Table 1: Measurement and operationalisation of variables**

Variable	Nature	Operationalization	Measurement	Question Number	Source
Financial awareness	Independent variable	Being conscious of financial concepts	7-Point likert scale	FAW 1 - FAW 5	Kumari et al., 2020; Bhushan and Medury, 2014
Financial knowledge	Independent variable	Financial knowledge assessed objectively	7-Point likert scale	FKN1 – FKN7	OECD/INFE, 2017; Lusardi, 2019; Morgan and Long, 2020
Financial skills	Independent variable	Skills in using financial knowledge	7-Point likert scale	FSK1-FSK5	OECD/INFE, 2017; Singh and Kumar, 2017
Financial behaviour	Independent variable	How often financial knowledge is put into practice	7-Point likert scale	FBH1-FBH5	Adam, 2020; Kumar 2017; Lusardi, 2019
Financial attitude	Independent variable	The beliefs in financial concepts	7-Point likert scale	FAT1-FAT5	OECD/INFE, 2017; Kumar 2017; Morgan et al., 2019
Access	Independent variable	How easily one can access financial products	7-Point likert scale	ACC1-ACC10	Chakrabarti and Sharma, 2018; Camara and Tuesta, 2014
Usage	Independent variable	How often one use financial services	7-Point likert scale	USA1-USA10	Chakrabarti and Sharma, 2018; Sarma, 2008
Quality	Independent variable	How financial services meet the needs of respondents	7-Point likert scale	QUAL1 - QUAL10	Chakrabarti and Sharma, 2018; Demircuc Kunt and Klapper, 2013; Singh et al., 2017; Bhatia and Singh, 2019
Control and decision-making-power	Dependent variable	Ability of respondents to control and make decisions	7-Point likert scale	CDMP1-CDMP7	Adam et al., 2017; Shim et al., 2009
Financial well-being	Dependent variable	Being satisfied with financial status	7-Point likert scale	FWB1-FWB7	Adam et al., 2017; Shim et al., 2009
Social network	Moderating variable	Ability to network with people	7-Point likert scale	SN1-SN9	Bongomin et al. 2016
Patriarchal culture	Moderating variable	Man superiority over woman	7-Point likert scale	PATC1-	Gyan et al. 2020; Rawat, 2014

**Source: Author's Construct (2023)**

### **Pre-testing of Instrument**

Sometimes respondents misinterpret and misunderstand the questions in the instrument resulting in biases that affect the reliability of the instrument (Hilton, 2020). Also, Sekaran and Bougie (2003) posited that reliability is important because it indicates the extent to which an instrument is free from bias and error. The research instrument was pre-tested to ensure the reliability and validity of the constructs used in the study. According to Boateng, (2020), pre-testing is an exercise carried out to test the understandability of the questions as well as to ensure that they measure what they are supposed to measure in the construct. The reliability also indicates how consistent responses can be under similar contexts. In other words, it measures how questions in the instrument are answered when administered in a different, similar setting.

The pre-testing occurred in June 2022 with one hundred (100) questionnaires distributed to women micro-entrepreneurs at La Nkwantanang Medina municipality in the Greater Accra Region of Ghana by three field assistants. The reason for the choice of the Municipality is that the population of women micro-entrepreneurs in La Nkwantanang Medina municipality is homogeneous to the study population. The pre-testing of the instrument helped in identifying questions that were ambiguous as well as questions that contained errors.

In testing the reliability of the instrument, Cronbach's Alpha was used. A Cronbach alpha value of 0.7 to 1 is considered the best. Thus, the closer the value is to 1 the higher the consistency of the instrument. However, it has been suggested by Sekran and Bougie (2016) that an alpha value of 0.5 or 0.6 can

be considered moderate in the early stage of research in other to save time. As indicated in Table 2, the test results suggest good reliability.

**Table 2: Pre-test Scale Reliability Checks**

Constructs/Variables	No. of Items	Cronbach's/ Omega Alpha
Financial literacy	27	0.923
Financial Awareness	5	0.838
Financial knowledge	7	0.799
Financial Skills	5	0.824
Financial attitude	5	0.772
Financial behaviour	5	0.870
Financial inclusion	30	0.939
Access	10	0.850
Usage	10	0.792
Quality	10	0.947
Economic empowerment	14	0.949
Control and decision-making power	7	0.882
Financial well-being	7	0.964
Social network	9	0.871
Patriarchal culture	6	0.735

Source: Field Survey (2023)

### Data Collection Procedure

Data collection for the study was preceded by the recruiting and training of four (4) field assistants in June 2022. These field assistants who collected the data for the pre-testing began the main data collection for the study between 1<sup>st</sup> July and ended on 31<sup>st</sup> October 2022. During this period, the four field assistants distributed four hundred and eighty (480) questionnaires to women micro-entrepreneurs in all three sub-metros based on the number of females in each sub-metro as provided by Ghana Statistical Service population and housing census (2021). With female population of 58,278 in Ablekuma

sub-metro, 48,210 in Ashiedu keteke sub-metro and 43,593 in Okaikoi south sub-metro, the 480 questionnaires were distributed based on the percentage share of each sub-metro, resulting in 186 to Ablekuma sub-metro, 154 to Ashiedu Keteke sub-metro and 140 to Okaikoi south sub-metro.

The field assistants visited popular areas in the three sub metros, where many women micro entrepreneurs operate their businesses. Such areas include Makola, Abobloshie and Kaneshie. Any woman micro-entrepreneur they identified was selected for the study. The field assistants explained the purpose of the study to them and those who accepted to be part of the respondents were given a copy of the questionnaire to administer. Those who could not read and write were assisted by the field assistants to complete the questionnaire and those who were capable of reading and writing were asked to self-administer the questionnaire. Some decided to take the questionnaires home and were asked to return them on the next visit by the field assistants. At the end of the exercise, four hundred and twenty-five responses were retrieved.

The main challenge in the data collection was that some of the respondents did not have time for the field assistants because they were busily engaged in their businesses, particularly those who needed help from the field assistants in administering the questionnaires. However, this was overcome by the field assistants being patient with them by spending a long time with one respondent.

### **Common Method Bias**

There is a likelihood of encountering Common Method Bias (CMB) when questionnaires are used for research (Fuller et al., 2016). Several factors can cause intercorrelation among measures to be inflated or deflated when

measures in the questionnaire are affected by common method bias (Lindell & Whitney, 2001). Common method bias occurs when the same response method is utilized to scrutinize both the dependent and the independent variables. Even though, CMB is conceptually different from common method variance, they are often employed interchangeably (Kock et al., 2021). According to Podsakoff et al. (2003), common method variance refers to ‘‘the variance that is attributable to the measurement method rather than to the constructs the measures are assumed to represent’’.

When relationships between measured variables are affected by common method variance, there is the presence of common method bias (Jakobsen & Jensen, 2015). Common method bias poses a threat to study results as it affects the validity and reliability of the empirical findings (Jakobsen & Jensen, 2015; Viswanathan & Kayande, 2012). Since this study relied on a questionnaire, there was a need to resolve the possible issue of common method bias. In addressing common method bias, a full collinearity test was employed. This was done before the presentation of the structural model. In PLS-SEM, the CMB is ascertained by relying on the collinearity statistics (ie, Variance Inflated Factor, VIF) scores. It is recommended that the scores of VIF of the indicators should range from 0 to 5.0 (Becker et al., 2016).

### **Reliability and Validity**

Reliability denotes to the extent to which the data collection techniques as well as analytical procedures will produce consistent results when replicated (Hair et al., 2019). In other words, reliability ensures that there is consistency in measurement results when the research instrument is replicated.

Sometimes, the researcher or the respondents can be biased or make errors which can affect reliability. Ensuring the reliability of the research instrument is important in research as it guarantees the continuity of the research. This means that when the research instrument is not reliable, the researcher cannot go ahead with the research.

Cronbach alpha,  $\rho_a$  as well as composite reliability were employed in testing internal consistency reliability. In the PLS-SEM, Cronbach alpha is considered to be conservative and composite reliability is therefore recommended to be suitable in recent studies (Hair et al., 2019). The acceptable internal consistency coefficient is 0.7 or higher (Peterson et al., 2013). However, a minimum of 0.4 is also acceptable (Hair et al., 2021). The study ensured the reliability criteria were met.

Validity refers to the degree to which the items in the research instrument measure what they are supposed to scrutinize (Hair et al., 2021). It is concerned with ensuring that the instrument contains the right information relating to the constructs used in the research. To ensure the validity of the instrument, existing theoretical frameworks as well as validated instruments, were relied on. Also, assistance from experts in the various constructs used in the study was sought to review the instruments before administering them. Convergent validity and discriminant validity are the two main measures of validity in PLS-SEM (Hair et al., 2021).

In testing convergent validity, Average Variance Extracted (AVE) was used. According to Adam (2017), in testing convergent validity, the AVE of the latent variables should be 0.5 or above, while in discriminant validity, the square root of the AVE should be greater than the values of the correlation

among the latent variables. Even though discriminant validity could be measured using outer loadings, Fornell lacker criterion and HTMT, recent studies considered the HTMT ratio as the best measure. Before the researcher continued with further tests, it was ensured that both the validity and reliability criteria were met.

### **Data Processing and Analysis**

Data processing and analysis is an activity that involves the conversion of data obtained from respondents into valuable, usable information using a numerical format that is machine-readable, to enable further analysis by a computer program. Examples of computer programs are Smart PLS, SPSS, or Stata. Data processing as well as analysis is a requirement in social science research because raw data from respondents is meaningless until it is transformed into meaningful information for analysis (Bhattacharjee, 2012). In this regard, IBM SPSS 21 version, Smart PLS 4, as well as Microsoft Excel were utilized in the data coding and entry, identifying missing numbers, descriptive analysis and inferential analysis.

Questionnaires retrieved from respondents were sorted out to ensure that those that were not completed were discarded. With the help of an Excel spreadsheet, the data was coded and, entered and transferred to SPSS to check out missing values and outliers. In the coding process, a unique code was assigned to each questionnaire item. For example, FAW, FKN, FSK, FBH and FAT were assigned to financial awareness, financial knowledge, financial skills, financial behaviour and financial attitude, respectively. The same was done for financial inclusion, economic empowerment, social networks and patriarchal culture. Using frequency distribution tables, the demographic



characteristics of participants were analysed. PLS-SEM was used in the inferential analysis because of its robustness in dealing with multiple dependent and independent variables in one model (Rigdon et al., 2017). Also, compared to normal regression analysis which estimates path coefficients separately, PLS-SEM is capable of estimating the path coefficient at a time.

### **Partial Least Square- Structural Equation Model (PLS-SEM)**

Structural Equation Modelling (SEM) is a method of second-generation multivariate data analysis that is capable of testing linear and causal relationships that are supported by theories (Chin, 1998; Wong, 2013). It is a powerful tool that is used to scrutinize the relationship among latent variables, particularly in social science. CB-SEM and PLS-SEM are two approaches researchers can apply in social (Rigdon et al., 2017). However, PLS-SEM was adopted for the study because of its numerous advantages, among which are: its suitability for small sample size, accurate predictive power and suitability for non-normal data distribution. Researchers are required to formulate their hypotheses based on theories in a conceptual framework so that PLS-SEM can use statistical power to analyse them (Rigdon et al., 2017).

Measurement scales in PLS-SEM are two types: reflective scale and formative scale. In the reflective scale, the indicators of the construct are extremely linked and interchangeable. This means that the indicators are correlated, hence the need to examine their reliability and validity (Hair et al., 2022). The directional arrows in the reflective scale point away from the constructs. Smart PLS, by default, recognizes the indicators as reflective scale; hence, the arrows point to the indicators from the construct. In the formative

scale, the indicators are not interchangeable among themselves. Thus, there is no linkage among them to warrant reporting on their reliability and validity.

Generally, the modelling approach in PLS-SEM can be viewed from the measurement model as well as structural model. Whereas the measurement model deals with the relations between the construct and the observed indicators, the structural model specifies the relations among the constructs used in the model (Henseler et al., 2015). Thus, the structural model indicates the path from the exogenous variables (independent variable) to the endogenous variable (dependent variable).

### **Measurement Model Assessment**

Several steps were followed in assessing the measurement model, and the first step was the reflective model assessment, involving the measurement of indicator reliability measured by indicator or factor loading. According to Hair, Risher, Sarstedt and Ringle (2019), indicator reliability deals with the extent to which a construct explains the variance in the indicators that make up the construct. Factor loading of 0.7 or higher is recommended in social science, meaning that the construct explains more than 50 percent of the variance in the indicators. However, Hair et al. (2021) asserts that factor loading of less than 0.7 should be maintained if only it can contribute to significant improvement in the Composite Reliability (CR) as well as the Average Variance Extracted (AVE) is greater than 0.5. Similarly, factor loading that is at least 0.4 is considered by Hair et al. (2021) as acceptable. Therefore, the researcher accepted a factor loading that is at least 0.4.

The second step is the measurement of internal consistency reliability, which involves the use of Cronbach alpha, rho <sub>A</sub> and Composite Reliability.

The Cronbach alpha is the lower bound and the composite reliability is the upper bound, with  $\rho_A$  falling in between the CA and the CR (Hair et al. (2019). Whilst CA is considered too conservative and CR is also considered too liberal,  $\rho_A$  is considered fair. However, CR is considered the best measure of internal consistency reliability (Hair et al., 2021). As 0.7 or higher is recommended for internal consistency, it was ensured that all the constructs met this threshold (Henseler et al., 2015).

Following the assessment of internal consistency reliability is the assessment of convergent validity which measures the extent to which the latent variables converge to explain variance in the indicators of the latent variables (Hair et al., 2021). AVE is the metric used in assessing convergent validity and it should be greater than 0.5 (Hair et al., (2019). To compute the AVE, the average of the squared outer loadings of the various indicators is calculated. AVE for each construct was computed, and the scores were greater than 0.5

Finally, in the measurement model, discriminant validity was assessed. Discriminant validity measures the extent to which the indicators of a construct differ empirically from other construct indicators. In other words, the discriminant validity ensures that the indicators in one construct are not the same indicators used in other constructs, thus making the constructs different from one another (Hair et al., 2019). Discriminant validity can be tested using Cross-loadings, the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio with the latter considered to be more appropriate. Studies by Rigdon et al. (2017) and Henseler et al. (2015) have found that both cross-loadings and Fornell-Larcker have not been effective in addressing

discriminant validity problems, hence the use of HTMT as the more appropriate measure (Hair et al., 2021). For the conservative, a threshold of less than 0.8 specifies that there is no discriminant validity issue, whereas a value above 0.9 suggests discriminant validity issues.

### **Collinearity Assessment and Structural Model Assessment**

The evaluation of the structural model should be preceded by a collinearity assessment (Hair et al., 2019). Collinearity exists when the predictor variables are highly correlated to explain the dependent variable. Collinearity implies that the independent variables are measuring the same thing in predicting the dependent variables, which will affect accurate hypothesis testing, estimation and forecasting (Hair et al., 2019). Collinearity is assessed using the Variance Inflated Factor (VIF). VIF greater than 5 indicates potential collinearity problems (Hair et al., 2021).

In assessing the structural model, the researcher must ensure that the measurement model is satisfactory. The structural model, which measures the relationships between variables, is the core for testing the hypothesis based on theories developed for the studies (Hair et al., 2011). The basic criteria for evaluating the structural model involve path coefficient, coefficient of determination (R-square), Effect size ( $f^2$ ), blindfolding and predictive relevance ( $Q^2$ ). According to Hair et al., (2019),  $R^2$  measures the variance by which the exogenous variables explain the endogenous variable and therefore indicates the model's explanatory power. The  $R^2$  value should range between 0 and 1, with values 0.75, 0.50, and 0.25 described as substantial, moderate and weak, respectively.

Effect size measures the effect of each exogenous variable on the endogenous variable. The effect size of 0.02 is considered small, 0.15 is considered medium and 0.35 is considered large (Cohen, 1998). However, Aguinis et al. (2005) argued that moderating effects in moderation models are normally low and suggested 0.009 as the average moderating effect size. Against this backdrop, Kenny and Judd (2019) and Hair et al. (2021) recommended 0.005, 0.01 and 0.025 as small, medium and large effect sizes, respectively. This study adopts Kenny and Judd (2019) and Hair et al. (2021) guidelines for moderation analysis.

Finally, t-statistic and significant levels are necessary for testing the significance of the hypothesis and in this case, P values level less than 5 % and t-statistics greater than 1.96 are considered significant.

### **Ethical Consideration**

A research proposal together with application letter was sent to University of Cape Coast Institutional Review Board (UCCIRB) in February 2022 for approval. In May 2022, approval from UCCIRB was obtained to begin data collection for the research. A consent form seeking the acceptance or otherwise of respondents to participate in the study was made available to them. Those who agreed to participate were given a questionnaire to fill out. The study ensured confidentiality of respondents by assuring them that the information they provide will be solely used for the research and under no circumstances will it be released to any third party. The Participants of the research were also assured of total protection by assuring them that their names were not indicated in the research report and were not featured in the questionnaires they administered. Lastly, participants were informed that there

was no monetary compensation attached to the administration of the questionnaire and that it was voluntary.

### **Chapter Summary**

The research was based on a positivist approach, using a quantitative method and an explanatory design. Surveys were given to women micro-entrepreneurs in Accra Metropolis, located in the Greater Accra region. The 2021 population and housing census report from the Ghana Statistical Service was used to estimate the number of women micro-entrepreneurs in the three sub-Metros of Accra. A pre-test of the survey tool was done to check for reliability. Smart PLS version 4 was employed to run the PLS structural equation model for data analysis.

## CHAPTER FOUR

### BACKGROUND OF RESPONDENTS AND DESCRIPTIVE STATISTICS OF VARIABLES

#### Introduction

This chapter deals with the analysis of the demographic characteristics of respondents who participated in the study, the evaluation of the normality of the data collected as well as the descriptive analysis of the variables using means and standard deviations. Regarding the demographic characteristics, the information captured includes the respondents' age group, marital status, level of education, number of children, nature/kind of business operated, number of years the business has existed, number of employees working in each firm, and the estimated amount of capital used in the business. Finally, the test for the normality of the data for each of the variables, along with their items or factors, was done using the Skewness and Kurtosis statistics.

#### Background Profile of the Participants

This section presents the background features of the respondents of the study. The specific data collected concerning the respondents were age group, marital status, level of education, number of children, nature/kind of business operated, number of years the business has existed, number of employees working in each firm, and the estimated amount of capital used in the business. Frequencies and percentages were used in the analysis of the background information.

**Table 3: Background of the Respondents**

<b>Variable</b>	<b>Label</b>	<b>Frequency</b>	<b>(%)</b>
<b>Age group</b>	20 -29	73	18.3
	30-39	153	38.3
	40-49	90	22.5
	50-59	58	14.5
	Above 60	26	6.5
<b>Marital status</b>	Single	40	10.0
	Married	258	64.5
	Cohabiting	45	11.3
	Divorced/separated	31	7.8
	Widowed	26	6.5
<b>Education</b>	No formal education	81	20.3
	Up to SHS/WASSCE	277	69.3
	Technical/Vocational/O level/ A level	33	8.3
	Diploma/HND	7	1.8
	Bachelor's Degree	2	0.5
<b>Number of children</b>	None	39	9.8
	1	96	24.0
	2	92	23
	3	87	21.8
	4	64	16.0
	Above 4	22	5.5
<b>Nature of business</b>	Retail trading	247	61.8
	Service	101	25.3
	Agro-processing	39	9.8
	Manufacturing	13	3.3
<b>Number of years</b>	1-5 years	18	4.5
	6-10 years	83	20.8
	11-15 years	65	16.3
	Over 15 years	234	58.5
<b>No of employees</b>	None	250	62.5
	1	108	27.0
	2	32	8.0
	3	7	1.8
	4	3	0.8
<b>Capital</b>	Less than GH¢2,000	114	28.5
	GH¢ 2,000 to GH¢ 3,000	161	40.3
	GH¢ 3,001 to GH¢ 4,000	87	21.8
	GH¢4,001 to GH¢ 5,000	26	6.5
	Above GH¢ 5,000	12	3.0
<b>Total</b>		400	100

Source: Field Survey (2023)

Out of the 480 questionnaires administered, 425 were received, constituting an 88.5 percent response rate. This satisfies the suggestion by Saunders et, al. (2013) that the response rate should be at least 75 percent for



the sample size to statistically represent the population. However, due to incomplete questionnaires and missing data, 400 questionnaires were used for the study which is above the minimum sample size of 380.

The age group of the participants was taken to assess the various classes of the sampled Women Micro-entrepreneurs (WMEs) in Ghana. A look at the summary of the report in Table 3 indicates that approximately all the women were within the youthful working age. In sum, 38.3% (n=153) of the women were within the majority age group range of 30 - 39 years. The next group 22.5% (n=90) were within the age range of 40 – 49 years, while 18.3% (n=73) of the respondents were between 20 – 29 years old. Furthermore, 14.5% (n=58) of the respondent women were in the 50 – 59 years age group, and finally, 6.5% (n=26) of the sampled women micro-entrepreneurs were 60 years and above. This is similar to Porter et al. (2020), Snellinger (2018), and Itibe (2016) who found more than 60 percent of female entrepreneurs in the same bracket age. This implies that more than 60 percent of women micro-entrepreneurs (30 to 49-year group) are in their youthful age. Normally, the majority of women in this age bracket are economically active but may not be getting jobs in the former sector. Nonetheless, they have to work for their livelihood and to support their family and the only alternative is to engage themselves in entrepreneurial activities.

With regards to the marital status of the respondents, the data shows that the majority of them, constituting more than 60 percent 64.5% (n=258) reported that they were married. This supports the conclusions of Quagrainie et al. (2021), Tuffour et al. (2022) as well as Adom et al. (2018). Those divorced were 31(7.8%) and widowed, 6.5% (n=26). The least of women

micro-entrepreneurs are in the cohabitating group; 10% (n=40) and single group; 11.3% (n=45).

The level of education of the respondents suggests that the majority of the respondents 69.3% (n=277) have attained the senior high school certificate, meaning that they are literate. This indicates that Accra metropolis has a significant number of literate population. This is followed by WME who have no formal education 20.3% (n=81). The reason might be due to the high illiteracy rate among women fishmongers who were part of the participants (Nyemah et al., 2017; Boateng, 2014). Nonetheless, with the help of research assistants, appropriate responses were gathered from them. Interestingly, only about 2.3% (n=12) of WME have tertiary education (Degree and diploma). This might be due to the ability of women with tertiary education to expand their business into Small and Medium Enterprises (Salifu et al, 2018).

Information gathered from the women indicates that 9.8% of the women had no children and 24% had one child. Table 3 further shows that 23 percent of the women have 2 children, 21.8 have 3 children and 5.5 percent of the women have 4 children and above. This means that the majority of WMEs are having less than 4 children. Concerning the nature of business, Table 3 indicates that the majority of the MWE (61.8%) operate in the retail trade. These women normally buy and sell foodstuffs, second-hand clothing and groceries among others. The next highest nature of business operated by the women entrepreneurs sampled was service businesses, comprising over 25 percent of the sampled businesses. The others were agro-processing (9.8%), and the least was manufacturing (3.3%).

For the number of years the respective businesses have operated or existed, the revelation from Table 3 indicates that 58.5 percent of them have operated for over 15 years. This was followed by 20.8 percent of the businesses that operated within 6 to 10 years. The least among them were those businesses that started operating from 1 to 5 years. In the same vein, data on the number of employees that work in the respective business was collected and reported in Table 3. A cursory look at the table depicts those 250 businesses, representing 62.5 percent had no employees. This suggests that the owners themselves were managing and working in their businesses alone. Also, 108, comprising 27 percent of the businesses, had one employee working for them. Only three businesses had four employees.

Finally, concerning the amount of capital used for business operations, the data shows that the majority of the businesses are running on a capital within the range of GH¢2000 - GH¢3,000 (40.3%), while a few of the businesses began on a capital above GH¢5,000 (3%). The data indicates that 28.5% of the businesses operated with a capital less than GH¢2000. This corroborates the findings of Boateng (2020) which indicates that the majority of WMEs are poor, with a capital of less than GH¢3,000.

### **Descriptive Statistics and Normality Assessment**

First and foremost, descriptive statistics through means and standard deviations were used to analyse the major constructs. These are financial literacy (i.e., made up of financial awareness, financial knowledge, financial skills, financial attitude and financial behaviour) and economic empowerment (control and decision-making power and financial well-being). Seven-point

Likert scale graded “strongly disagree=1 to strongly agree=7” was utilized for the questionnaires.

Also, normality checks on data were done to ascertain how evenly distributed the data points are relative to each other. This ensures that the data collected are not far from normal or what is expected. Although normality checks are not compulsory when using PLS-SEM for data analysis (Hair et al., 2019), Lai and Hitchcock (2015) notes that the process is necessary for users to have a good view of how the respondents perceive the phenomenon studied.

Despite several approaches existing on how to check for normality, Lai and Hitchcock (2015) criteria were used in the study. The author suggests that data is normal when the Skewness and Kurtosis scores of the various items of the constructs deployed in a study fall between 0 to  $\pm 1.5$ . The tables that ensue are used to assess the means, standard deviations and normality statistics of the respective variables.

**Table 4: Descriptive and Normality Assessment for Financial Literacy**

Items	Mean Stat	Std. Dev. Stat	Skewness Stat	Kurtosis Stat
<b><i>Financial Awareness (FAW)</i></b>				
Awareness of savings interest rate	2.30	1.24	1.16	1.07
Awareness of loan interest rates	2.11	1.31	1.27	1.37
Awareness of inflation rate	2.29	1.29	1.04	0.80
Awareness of financial services	2.44	1.35	1.09	1.39
Awareness of financial risk	2.47	1.26	1.04	1.34
Mean of means (FAW)	2.32	0.97	1.02	0.89
<b><i>Financial Knowledge (FKN)</i></b>				
If I deposit money in a bank account at a 15% interest rate, while the annual inflation rate is 19%, the money from my account can buy fewer goods /services next year.	2.27	1.15	1.26	1.14
Taking GH¢10,000 now is better than taking GH¢11,000 in one year time if the interest rate is 15%	1.71	1.05	0.22	0.76
If I borrow GH¢10,000 from a financial institution at an interest rate of 15% per annum and I am to pay back the amount plus interest next year, I am likely to pay	1.67	1.09	0.44	0.55

GH¢11,500				
Suppose five friends are given a gift of GH¢2,000 to share and they are sharing it equally, it is likely each would get GH¢400	1.78	1.27	0.22	0.95
Deposit into a savings account earn interest than current account	1.59	1.03	1.48	0.87
High inflation means that the cost of goods and services is rising.	2.17	1.43	1.31	1.11
Compensation from insurance policy depends on the amount of premium	1.67	1.04	1.10	0.79
Mean of means (FKN)	1.83	0.86	0.75	
<b>Financial Skills (FSK)</b>				
Ability to access financial investment opportunities	1.63	1.11	0.81	0.55
Ability to use ATM to deposit money	1.55	1.08	0.88	0.34
Ability use online business	1.50	1.08	0.92	0.841
Ability to estimate the cost of the money	1.56	1.08	0.83	0.79
Ability to estimate returns on investments	1.57	1.00	0.54	0.96
Mean of means (FSK)	1.56	0.94	0.37	1.30
<b>Financial attitude (FAT)</b>				
Belief in savings.	1.56	0.93	0.59	0.32
Belief in loans for investment	1.50	0.93	0.95	1.93
Belief in budget preparation	1.46	0.91	0.94	1.20
Belief in in using debit cards usage.	1.43	0.83	0.85	1.05
Belief in mobile banking usage	1.43	0.91	0.23	1.32
Mean of means (FAT)	1.47	0.72	0.11	0.55
<b>Financial behaviour (FBH) and overall financial literacy</b>				
Extra money is saved for other investment opportunities	1.66	1.15	0.67	0.60
Budget is prepared and reviewed	1.52	0.96	0.004	1.10
Bill are paid on time	1.51	0.94	0.19	1.76
Keeping a close watch on expenses	1.49	1.00	1.07	0.87
Doing business online	1.45	0.91	0.95	0.22
Mean of means (FBH)	1.52	0.80	0.39	1.21
<b>Overall mean (Financial literacy)</b>	<b>1.74</b>	<b>0.73</b>	<b>1.13</b>	<b>0.73</b>
<b>Valid N (listwise)</b>				

Source: Field Survey (2023)

Financial awareness measures the extent to which WMEs are aware of the existence of financial indicators such as inflation rate, interest rate and risk. Five questions were presented for the respondents to answer. The question 'I have awareness about the existing financial risk' recorded the highest score with a mean of 2.47. This was followed by a mean score of 2.44 on the question 'I have awareness about existing financial services. The lowest

score was on the question ‘I am aware of existing loan interest rate’ with a mean of 2.11. The mean of means for all the financial awareness questions was 2.32, meaning that the financial awareness of respondents is weak. The data on financial awareness is devoid of normality issues and is not peaked as the scores for skewness (1.02) and kurtosis (0.89) are within the  $\pm 1.5$  range.

Financial knowledge is the understandability and computational ability of the WME. Seven questions were asked on financial knowledge and the question “If I deposit money in a bank account at a 15% interest rate, while the annual inflation rate is 19%, the money from my account can buy fewer goods /services next year”, received the highest mean of 2.27. “High inflation means that the cost of goods and services is rising”, was the next highest with a mean of 2.17. The lowest mean value of 1.59 was on “when I deposit money into a savings account, I will get more interest than the current account.” From the table, the average mean of financial knowledge is 1.83, meaning that WMEs have low financial knowledge. Also, the data on financial knowledge is devoid of normality issues and is not peaked as the scores for skewness (0.75) and kurtosis (0.86) are within the  $\pm 1.5$  range.

Financial skills involve the ability of the WME to understand and use financial concepts. Five questions were asked and the question “I can access assess financial investment opportunities received the highest mean of 1.63, followed by a 1.57 mean for the question “I can estimate a return on investment. The lowest mean is 1.50 and it is for the question “Can use online business”. This means that WME's financial skills in online business are very low compared to the rest. The average mean of the financial skills questions was 1.56, indicating that their financial skills are very poor. As indicated in

Table 4, the data on financial skills indicates normality and is not peaked as the scores for skewness (0.37) and kurtosis (1.30) are within the  $\pm 1.5$  range

Table 4 indicates the financial attitude of WME and it indicates that the question “I believe that saving some of my business income is worth it” has the highest mean of 1.56. The lowest mean was reported on two questions; the questions on “I believe in the use of debit cards to withdraw money” and “I believe in using mobile banking.” In all, the financial attitude of respondents is very weak, with an average mean of 1.47. This means that the majority of the respondents chose from disagree to strongly disagree. The scores for skewness (0.11) and kurtosis (0.55) are within the  $\pm 1.5$  range, suggesting that there are no normality issues and the data is not highly peaked.

Putting financial concepts (budgeting, saving and borrowing) into practice is what is meant by financial behaviour. Five questions were asked on financial behaviour. Respondents disagree with the question, “I save extra money for other investment opportunities.” The mean of 1.66 suggested that they don’t save to meet any investment opportunities. This is followed by the question “I prepare and review my budget”, also receiving a lower mean of 1.52. and “ I do business online received the lowest mean of 1.45. This reported that respondents strongly disagree that they do business online. Financial behaviour mean of means and standard deviation ( $M = 1.52$ ;  $SD = 0.80$ ). Of 1.52 suggested very low financial behaviour of WME. The data on financial attitude is devoid of normality issues and is not peaked as the scores for skewness (0.31) and kurtosis (1.21) are within the  $\pm 1.5$  range.

The overall financial literacy level of respondents was analysed and according to Table 4, financial literacy was low based on the evidence

engrained in the mean and standard deviation ( $M = 1.74$ ;  $SD = 0.73$ ) scores of the construct. Specifically, the various dimensions or sub-constructs of financial literacy were all low, suggesting that the women micro-entrepreneurs had low financial literacy levels. For instance, the results demonstrated that financial awareness ( $M = 2.32$ ;  $SD = 0.97$ ), financial knowledge ( $M = 1.83$   $SD = 0.86$ ), financial skills ( $M = 1.56$ ;  $SD = 0.94$ ), financial attitude ( $M = 1.47$ ;  $SD = 0.72$ ) and financial behaviour ( $M = 1.52$ ;  $SD = 0.80$ ). The results from Table 4 suggest that financial literacy data was not contaminated by normality issues, as the skewness is 1.13. Also, the kurtosis of 0.73 suggested that there are no outliers.

**Table 5: Descriptive and Normality Assessment for Financial Inclusion**

Items	Mean	Std. Dev	Skewness	Kurtosis
	Stat	Stat	Stat	Stat
<b>Access (ACC)</b>				
Usable access road to the nearest formal financial institutions	4.93	1.64	-1.22	0.49
Nearest formal financial institution is less than 1km from my business location	4.72	1.642	-0.72	-0.65
Living close to an ATM	3.44	1.91	0.32	-1.14
Several formal financial institutions available visit near my business location	4.37	2.03	-0.64	-1.16
Easy access to insurance service providers	2.00	1.32	0.88	0.57
Access to mobile money transactions	6.00	1.71	-0.93	0.57
There are places close to my business location where I can pay my bills	2.71	1.71	0.84	-0.46
Money is available to run a savings account	2.80	1.87	0.69	-1.01
Enough money to purchase insurance services	2.79	2.00	0.64	-1.17
Borrowing from formal financial institutions is affordable	1.61	1.04	0.28	0.56
Mean of means (ACC)	3.53	0.70	-0.41	0.15
<b>Usage (USA)</b>				
Using savings account to save for the future	1.79	1.40	0.07	0.39
Using savings account to save for any	1.73	1.14	0.10	0.49



emergencies				
Loan from a financial institution to finance my business	2.49	2.09	1.00	-0.66
Using insurance services for health cover	1.89	1.37	1.02	0.01
Using insurance services for my business	1.38	0.92	0.65	1.28
Using bank account to receive remittances(money)	1.62	1.22	0.44	0.81
Using bank to transfer money	2.03	1.62	1.01	1.24
Using mobile money services to pay bills	4.80	2.20	-0.84	-0.88
Using mobile money services to send money	5.57	1.91	-1.39	0.66
Using mobile money services to receive money	5.84	1.72	-0.77	0.22
Mean of means (USA)	2.91	0.77	0.62	1.12
<b>Quality (QUAL)</b>				
Getting customer support on my mobile money transactions	5.99	1.70	-1.02	0.63
Getting a quick help for problems with mobile money transactions,	4.81	2.20	-0.85	-0.86
Friendly and helpful mobile money service providers	5.57	1.91	-1.38	0.65
Prompt response from bank staff to unpleasant experience	2.26	1.09	0.57	-0.12
Imposing service charges is fair to bank customers	2.06	1.29	1.32	0.31
Safety of transactions when using formal services	3.00	1.22	-0.49	-1.06
Bank's ATM service availability for use	2.70	1.38	0.01	-1.33
Receiving prompt information on ATM transactions	2.91	1.33	-0.24	-1.20
Banking hours are convenient for transaction	3.01	1.26	-0.57	-1.14
Formal financial institutions have modern equipment making transactions easy	2.95	1.31	-0.50	-1.38
Mean of means (QUAL)	3.52	0.62	-0.82	0.67
Overall mean (Financial inclusion)	3.32	0.55	-0.32	0.02
Valid N (listwise)				

Source: Field Survey (2023)

Financial inclusion is the process of having access to and using the services and products offered by authorized financial intermediaries (Kumari et al., 2020). Thus, financial inclusion involves three dimensions: access,

usage as well as quality (Cabeza-García et al., 2019). Access provides the environment for using financial services and products. Table 5 indicates that access to mobile money transactions received the highest response with a mean of 6.0, indicating that entrepreneurs generally have high access to mobile money transactions in the Accra metropolis (Afutu-Kotey et al., 2017).

This is followed by the question, “There is a usable access road leading to the nearest formal financial institutions” which has a mean of 4.93, meaning that WME somehow agrees that financial institutions are closer to them. The lowest mean (1.61) was on the question, “The cost of borrowing money from formal financial institutions is affordable”. This suggests that the cost of borrowing is not affordable to the WME. The mean of means of access was 3.53, indicating that WME access to financial services and products is not all that high. The data on access is devoid of normality issues and is not peaked as the scores for skewness (-0.41) and kurtosis (0.15) are within the  $\pm 1.5$  range

Usage is the actual use of the financial services and products. The question “I have used mobile money services to receive money” received the highest mean (5.84), followed by “I have used mobile money services to receive and send money” (5.57). This implies that WME agrees that they use mobile money services. There is greater use of mobile money services in Accra Metropolis (Dayour et al., 2020). The least response on financial services usage is the question “I have used insurance services for my business” which received a mean of 1.38. The implication is that WME strongly disagrees with the use of insurance services for their business (Nyame-Asiama et al., 2022). The mean of means and standard deviation of usage ( $M = 2.9$ ;  $SD = .77$ ) suggested that generally, the use of financial services by WME is

low even though the use of mobile money services is high. The data on usage is normally distributed and is not peaked as the scores for skewness (0.62) and kurtosis (1.12) are within the  $\pm 1.5$  range

The last financial inclusion construct is quality. Quality measures the tendency to continue to use financial services and products. From Table 15, the mean and standard deviation ( $M = 5.99$ ,  $SD = 1.70$ ) suggested that the majority agree that they get customer support on their mobile money transactions. This is followed by the mean and standard deviation ( $M = 5.77$ ,  $SD = 1.91$ ), also indicating that mobile money service providers are friendly and helpful to MWEs. The mean of 3.5 indicates a high agreement with the quality of services and financial products rendered by providers of financial inclusion. The score of skewness (-0.82) indicated that the data is devoid of normality issues and the data is not peaked as the scores and kurtosis (0.67) are within the  $\pm 1.5$  range.

The overall mean and standard deviation of the financial inclusion construct was ( $M = 3.32$ ,  $SD = 0.55$ ); it can be said that the respondents had a moderate level of financial inclusion. Specifically, it can be asserted that the women have access to financial services and products in their locality ( $M = 3.53$ ,  $SD = 0.70$ ), except that they do not frequently use the financial products ( $M = 2.91$ ,  $SD = 0.77$ ). Furthermore, the information coming from Table 5 indicated that the women perceive financial products to be of moderate quality ( $M = 3.52$ ,  $SD = 0.62$ ). The overall skewness of -0.32 is an indication that financial inclusion data is normal, and with a kurtosis of 0.2, the data is not highly peaked.

**Table 6: Descriptive Statistics and Normality Checks for Economic Empowerment**

Items	Mean Stat	Std. Dev Stat	Skewness Stat	Kurtosis Stat
<b><i>Control and Decision-Making Power (CDMP)</i></b>				
Control over income and expenditure of my household	1.71	1.06	0.36	0.89
Control over the income of my business	1.82	1.24	0.26	0.48
Autonomy to decide savings option	1.80	1.24	0.33	0.64
Autonomy in investment decisions	1.72	1.11	0.46	1.00
Power over ownership of assets	1.75	1.17	0.40	0.46
Autonomy for the purchase, sale, or transfer of asset	1.79	1.23	0.36	0.91
Power to access and make decisions on credits	1.74	1.19	0.53	0.07
Mean of means (CDMP)	1.76	0.97	1.30	0.31
<b><i>Financial well-being (FWB)</i></b>				
Comfortable with my financial obligations	1.98	1.31	1.42	1.48
Comfortable with future financial security	1.84	1.34	1.01	0.73
Having financial resources that allow me to enjoy life	1.65	1.17	-0.19	0.80
Satisfaction with managing financial resources	1.66	1.27	0.21	0.42
Satisfaction with present financial situation	1.60	1.18	0.24	4.387
Satisfaction about future income sources	1.61	1.19	1.26	0.63
Having resources to enjoy good medical care	1.74	1.40	1.11	0.72
Mean of means (FWB)	1.72	1.06	0.10	0.28
Overall mean (Economic Empowerment)	1.74	0.71	1.64	0.96
Valid N (listwise)				

Source: Field Survey (2023)

Economic empowerment is the process by which individual get the ability to succeed and advance economically, as well as the power to make decisions that affect their lives. In the context of this investigation, it is evaluated by control and decision-making power as well as financial well-being. These variables were measured using 7 point Likert scale ranging from (1= strongly disagree) to (7= strongly agree).

Control and decision-making power refer to the ability to manage the income and expenditure of the household by preparing a budget and also making decisions that affect life choices. As per the table on control and decision-making power (Table 6), the mean of means and standard deviation of control and decision-making power ( $M = 1.76$ ;  $SD = 0.97$ ) suggested that the majority of WME selected strongly disagree and agree. It implies that the majority of the WMEs do not have control and decision-making power. Based on individual questions, the responses ranged from strongly disagree to disagree, meaning that WMEs control and decision-making power is weak.

Financial well-being measures an individual's satisfaction with present and future financial situation. As shown in Table 6, the financial well-being is not encouraging because the responses ranged from a mean of 1.60 to 1.98, indicating disagreement with all the financial well-being questions. The mean of means and the standard deviation ( $M = 1.72$ ,  $SD = 1.06$ ) also suggested that the financial well-being of respondents is weak. The skewness score of 0.10 and kurtosis score of 0.28 fell within the +1.5 and -1.5 range, suggesting that the responses are normally distributed and evenly peaked.

The overall mean and standard deviation of economic empowerment ( $M = 1.74$ ,  $SD = 0.71$ ) report that WMEs have weak economic empowerment. Also, with skewness and kurtosis of 1.64 and 0.96, correspondingly, the responses were not skewed and peaked.

**Table 7: Descriptive and Normality Assessment for Social Network**

Items	Mean Stat	Std. Dev Stat	Skewness Stat	Kurtosis Stat
Having close friends	4.62	1.93	-0.57	-0.70
Having prominent people as friends	2.22	1.57	1.42	1.24
Belonging to social groups	1.69	1.11	0.89	0.24
Having family support	3.15	1.15	-0.67	-0.52
Belonging to social groups which frequently meet with other groups	2.06	1.54	0.66	0.13
Getting information from my social networks	1.86	1.36	0.95	0.52
People in my network urged me to set financial goals	1.74	1.19	0.07	0.56
Using network opportunities to attain financial goals	1.82	1.27	0.67	0.02
Participating in activities within my network	1.86	1.28	0.78	0.03
Overall mean (SN)	2.33	0.79	1.25	0.34
Valid N (listwise)				

Source: Field Survey (2023)

Like the other constructs, the social network construct and its specific items met the normality threshold. A cursory look at the values of the Skewness and Kurtosis in Table 7 demonstrates that issues of abnormality in the data were not detected. This means that the social network construct is qualified for use in further statistical analysis. Likewise, the means of the various items, together with the overall mean of the construct, illustrated that the respondents disagreed with the effect that they have social networking ties with others when it comes to financial decision-making. This is because the mean score of the social network variable was low, a value of 2.33 on a 7-point Likert scale.

The final assessment related to the patriarchal culture construct. Table 8 was deployed to assess the level of patriarchal culture and its corresponding normality statistics. Concerning the construct, 6 questions were asked of the

respondents. After collecting the data, the means and standard deviations of each item were determined to establish surety of the existence of high-patriarchal culture perception levels of the respondents and vice-versa. Also, the responses were subjected to a normality test to check whether there were extreme values that may contaminate the results.

**Table 8: Descriptive Statistics and Normality Checks for Patriarchal Culture**

Items	Mean Stat	Std. Dev Stat	Skewness Stat	Kurtosis
Decisions concerning the family	6.17	1.12	-0.67	0.93
Decisions concerning where I do business	6.54	0.80	-0.31	0.97
Decisions on where to stay	6.46	0.86	-.11	0.74
Responsible for preparing children for school	6.15	1.12	-1.45	0.07
Responsible for cooking for the family	5.88	1.12	-0.65	-0.30
Responsible for cleaning, washing dirty cloths and tidying up the house is m	5.99	1.08	-0.77	-0.42
Overall means (Patriarchal culture)	6.19	0.52	-1.28	0.47
Valid N (listwise)				

Source: Field Survey (2023)

### Chapter Summary

The researcher in this chapter presented information on the demographic characteristics of the respondents as well as the normality of the data. In ensuring that the responses obtained from the respondents were free from abnormal data points, Skewness and Kurtosis values were used to check for data normality. The summaries generated on the respective tables show that the constructs met the normal distribution criteria. The next chapters address the research data on the analysis using partial least square structural equation modelling.

## CHAPTER FIVE

### FINANCIAL LITERACY, SOCIAL NETWORK, PATRIARCHAL CULTURE AND ECONOMIC EMPOWERMENT

#### Introduction

This chapter talks about the study's three main goals. First, it looks at how financial knowledge affects economic empowerment. Second, it examines how social networks influence the connection between financial knowledge and economic empowerment. The third goal focuses on how patriarchal culture affects the link between financial knowledge and economic empowerment. The chapter reviews the findings and discussions about both the measurement model and the structural model of the study. For the measurement model, it looks at indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. For the structural model, it addresses collinearity, path coefficient, effect size ( $f^2$ ), predictive relevance ( $Q^2$ ), and explained variance (R-square).

#### Influence of Financial Literacy (FL) on Economic Empowerment

To examine the influence of financial literacy on economic empowerment was one of the objectives. The measurement model and structural model were analysed and discussed below.

#### Measurement Model

The indicators used for the constructs were based on a reflective measurement model, hence the reflective measurement specifications used for the outer model analysis. Indicator reliability was measured using outer loadings. Internal consistency reliability was measured with Cronbach alpha, rho\_A and composite reliability, whereas Average Variance Extracted (AVE)



was used to measure the convergent validity. Discriminant validity was assessed by Heterotrait-Monotrait (HTMT).

**Table 9: Internal Consistency Reliability of the Effect of Financial Literacy (FL) on Economic Empowerment**

	Cronbach's alpha	rho_A	Composite reliability
Control and decision-making power	0.877	0.894	0.919
Financial attitude	0.863	0.894	0.915
Financial awareness	0.771	0.773	0.854
Financial behaviour	0.731	0.772	0.839
Financial knowledge	0.750	0.788	0.858
Financial skills	0.764	0.717	0.801
Financial well-being	0.882	0.923	0.912

Source: Field Survey (2023)

### Internal Consistency Reliability

As indicated in Table 9 above, Cronbach alpha, rho A, and composite reliability are measures used for internal consistency reliability. All the internal consistency reliability measures are sources of information for the outer model analysis. Hair et al. (2022) posited that Cronbach alpha exceeding 0.7 is considered acceptable for internal consistency. Based on the information above, the Cronbach alpha for all the constructs is greater than 0.7, meaning that they satisfy the minimum threshold. All the indicators for rho\_A have values greater than 0.7, which also means that the indicators measure the constructs reliably. Similarly, the composite reliability has scores greater than 0.7, with control and decision-making power having the highest (0.919) and financial skills having the lowest (0.801). Internal consistency reliability of financial literacy and economic empowerment constructs are valid because the

values of Cronbach alpha, rho\_A and composite reliability meet the minimum threshold of 0.7.

**Table 10: Indicator Reliability (outer loadings) of the Effect of FL on Economic Empowerment**

Indicators	Outer Loadings	T statistics	P values
CDMP1 <- Control and decision-making power	0.654	10.777	0.000
CDMP3 <- Control and decision-making power	0.934	93.418	0.000
CDMP5 <- Control and decision-making power	0.881	36.364	0.000
CDMP6 <- Control and decision-making power	0.946	108.938	0.000
FAT1 <- Financial attitude	0.831	17.108	0.000
FAT3 <- Financial attitude	0.905	39.939	0.000
FAT5 <- Financial attitude	0.915	41.485	0.000
FAW1 <- Financial awareness	0.780	24.444	0.000
FAW2 <- Financial awareness	0.791	24.877	0.000
FAW3 <- Financial awareness	0.787	26.085	0.000
FAW5 <- Financial awareness	0.722	17.406	0.000
FBH1 <- Financial behaviour	0.729	10.745	0.000
FBH3 <- Financial behaviour	0.797	15.774	0.000
FBH5 <- Financial behaviour	0.861	22.535	0.000
FKN1 <- Financial knowledge	0.701	12.294	0.000
FKN2 <- Financial knowledge	0.843	26.830	0.000
FKN5 <- Financial knowledge	0.899	72.563	0.000
FSK2 <- Financial skills	0.730	4.510	0.000
FSK3 <- Financial skills	0.717	4.219	0.000
FSK5 <- Financial skills	0.820	5.112	0.000
FWB1 <- Financial well-being	0.665	12.295	0.000
FWB2 <- Financial well-being	0.790	17.394	0.000
FWB3 <- Financial well-being	0.896	44.971	0.000
FWB6 <- Financial well-being	0.898	62.797	0.000
FWB7 <- Financial well-being	0.842	34.452	0.000

Source: Field survey, (2022)

### Indicator Reliability

Factor loadings are equally useful in measuring the reliability (indicator reliability) of the various indicators of the variables. The outer loadings for the respective variables of financial literacy and economic empowerment constructs are depicted in Table 10. Hair, Risher, Sarstedt and Ringle (2019) asserted that factor loadings of 0.7 or above are recommended. Similarly, Hair et al. (2022) indicated that a factor loading of 0.4 is considered

minimum for indicator reliability. However, Rasoolimanesh and Ali (2018) argued that, so long as an outer loading of less than 0.7 will not affect composite reliability and average variance extracted, it should be accepted.

From Table 10, all the outer loadings, except for one indicator of control and decision-making power (CDMP1) and another one in financial well-being (FWB 1), are greater than 0.7. The findings imply that the indicators reliably measured financial literacy and economic empowerment as all of them have factor loadings exceeding 0.4 with significant levels also greater than 0.05.

**Table 11: Average Variance Extracted (AVE) of the Effect of FL on Economic Empowerment**

	AVE
Control and decision-making power	0.743
Financial attitude	0.783
Financial awareness	0.594
Financial behaviour	0.636
Financial knowledge	0.670
Financial skills	0.573
Financial well-being	0.677

Source: Field Survey (2023)

### **Convergent Validity**

Convergent validity measures the extent to which variables correlate positively to measure a construct. In this case, it measures for example, how financial behaviour, financial skills, financial attitude, financial knowledge and financial awareness correlate positively to measure financial literacy. As depicted in Table 11, the convergent validity of the indicators was measured using Average Variance Extracted (AVE). All the AVE values were greater than 0.5, suggesting adequate convergent validity (dos Santos & Cirillo, 2023). This means that they are fit for structural model analysis.

**Table 12: Heterotrait-Monotrait Ratio (HTMT) of FL and Economic Empowerment**

	Control and decision- making power	Financial attitude	Financial awareness	Financial behaviour	Financial knowledge	Financial skills	Financial well-being
Control and decision- making power							
Financial attitude	0.304						
Financial awareness	0.487	0.518					
Financial behaviour	0.061	0.044	0.316				
Financial knowledge	0.167	0.312	0.464	0.064			
Financial skills	0.047	0.042	0.075	0.142	0.065		
Financial well-being	0.061	0.181	0.293	0.381	0.072	0.166	

Source: Field Survey (2023)

### **Discriminant Validity**

Discriminant validity ensures that the explanatory variables are not measuring the same thing in influencing the dependent variable. Thus, the variables should be unique or different from each other. Even though discriminant validity could be assessed using cross-loadings, the Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio, HTMT was used in examining discriminant validity. According to Henseler et al. (2015), modern studies recommend HTMT as the best measure because Fornell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity.

Table 12 represents HTMT in a correlation matrix form, indicating the discriminant validity of financial literacy and economic empowerment constructs in the model. The HTMT estimates the correlation between financial literacy and economic empowerment constructs, as suggested by (Henseler et al., 2015). Financial literacy and economic empowerment constructs are arranged in rows and columns to provide correlation coefficients in a diagonal form.

A discriminant validity problem arises when the value is greater than 0.90, whereas a value of 0.85 is considered a conservative threshold. From Table 10, all the correlation coefficients are less than 0.85, indicating that there is no discriminant issue. This implies that there is uniqueness between the constructs and are therefore accepted for the measurement model.

### Structural Model of Financial Literacy and Economic Empowerment

The evaluation of the structural model was preceded by a collinearity assessment. This was to ensure that financial literacy variables (predictor variables) are not highly correlated in explaining economic empowerment variables (Hair et al., 2019). Thus, multicollinearity was assessed using the results in Table 13

**Table 13: Multicollinearity Assessment (Inner VIF) of the Effect of FL on Economic Empowerment**

	Control and decision-making power	Financial well-being
Financial attitude	1.245	1.245
Financial awareness	1.450	1.450
Financial behaviour	1.094	1.094
Financial knowledge	1.188	1.188
Financial skills	1.002	1.002

Source: Field Survey (2023)

### Multicollinearity Assessment

Collinearity was assessed using the Variance Inflated Factor (VIF). Hair et al. (2021) posited that a VIF value greater than or equal to 3 indicates a collinearity problem. As evident from Table 13, there were no multicollinearity problems with financial awareness, financial attitude, financial knowledge, financial behaviour and financial skills, as the inner VIF is less than the maximum threshold of 3. This means that the explanatory variables are not highly correlated in explaining control and decision-making power, as well as financial well-being.

### Path Coefficient Assessment

There were ten hypotheses for objective one, which pursued to scrutinise the influence of financial literacy on economic empowerment of women micro-entrepreneurs. These hypotheses are:

*H1a: Financial awareness positively influences control and decision-making power*

*H1b: Financial knowledge positively influences control and decision-making power*

*H1c: Financial skills positively influence control and decision-making power*

*H1d: Financial behaviour positively influences control and decision-making power*

*H1e: Financial attitude positively influences control and decision-making power*

*H1f: Financial awareness positively influences financial well-being*

*H1g: Financial knowledge positively and significantly influences financial well-being*

*H1h: Financial skills positively influence financial well-being*

*H1i: Financial behaviour positively influences financial well-being*

*H1j: Financial attitude positively influences financial well-being*

Table 14 presents the hypothesis for objective one, path coefficients (Beta), effect size ( $f^2$ ), T statistics and P values of the variables employed in the financial literacy and economic empowerment model.

**Table 14: Path Coefficient of the Effect of Financial Literacy on Economic Empowerment**

Hypotheses	Beta	Standard Deviation	f <sup>2</sup>	T statistics	P values
H1a: FAW -> CDMP	0.078	0.021	0.049	3.711	0.000
H1b: FKN -> CDMP	0.924	0.012	0.367	78.123	0.000
H1c: FSK -> CDMP	0.020	0.016	0.005	1.295	0.195
H1d: FBH -> CDMP	0.033	0.016	0.011	2.023	0.043
H1e: FAT -> CDMP	0.001	0.000	0.037	0.971	0.971
H1f: FAW -> FWB	0.166	0.071	0.023	2.344	0.019
H1g: FKN -> FWB	0.134	0.049	0.019	2.720	0.007
H1h: FSK -> FWB	0.117	0.053	0.017	2.202	0.028
H1i: FBH -> FWB	0.305	0.054	0.106	5.596	0.000
H1j: FAT -> FWB	0.126	0.077	0.016	1.639	0.101

Source: Field Survey (2023)

***H1a: Financial awareness positively influences control and decision-making power***

The first hypothesis dealt with the influence of financial awareness on control and decision-making power. From Table 14 and figure 3, it can be seen that financial awareness has a significant and positive influence on the decision-making power of women micro-entrepreneurs (Beta= 0.078; p= 0.001). Thus, the hypothesis is supported. The path coefficient of the relationship between FAW and CDMP is positive and significant. This means that when WMEs are aware of the existence of financial terms such as savings, insurance, investment and inflation, they tend to employ them in their financial decision-making.) with a moderate effect size ( $f^2 = 0.049$ ). Effect size measures the effect of omission of exogenous variable on the endogenous variable. The effect size of 0.02 is considered weak, 0.15 is considered moderate and 0.35 is considered large (Cohen, 1998). This means that financial awareness has small to medium effect on control and decision-making power.



***H1b: Financial knowledge positively influences control and decision-making power***

In addition, Table 14 and Figure 3 indicate that financial knowledge has a strong positive relationship with the control and decision-making of WMEs and is significant (Beta= 0.924;  $p= 0.000$ ) with a large effect size ( $f^2 = 0.361$ ). The path coefficient of the relationship between FKN and CDMP is positive and significant. This supports the hypothesis that “financial knowledge positively influences control and decision-making power”. This means that an increase in financial knowledge of WMEs results in a greater increase in their control and decision-making power.

***H1c: Financial skills positively influence control and decision-making power***

Also, Table 14 and Figure 3 indicate that financial skills are not a predictor of WMEs' control and decision-making power. Thus, financial skills do not influence control and decision-making power (Beta= 0.020;  $p= 0.195$ ;  $p>0.05$ ) with no effect size ( $f^2 = 0.005$ ). The path coefficient of the relationship between FSK and CDMP is positive but not significant. Therefore, the hypothesis that financial skills influence control and decision-making power is not supported. In other words, there is an insignificant positive effect of financial skills on WMEs' control and decision-making power.

***H1d: Financial behaviour positively influences control and decision-making power***

Also, in assessing the seventh hypothesis, “Financial behaviour positively influences control and decision-making power”, Table 14 and

Figure 3 suggest that financial behaviour has a significant positive effect on control and decision-making power (Beta= 0.033;  $p= 0.043$ ). The path coefficient of the relationship between FBH and CDMP is positive and significant. However, the effect size ( $f^2 = 0.011$ ) shows a very small effect of financial behaviour on control and decision-making power. Nonetheless, the hypothesis is supported, meaning that when WMEs adopt responsible financial behaviour, they tend to enhance the way they control their household income and expenditure as well as decide on the best investment.

***H1e: Financial attitude positively influences control and decision-making power***

The results in Table 14 and Figure 3 show that there is an insignificant and weak positive relationship between financial attitude and control and decision-making (Beta= 0.001;  $p= 0.971$ ;  $p>0.05$ ) with zero effect size ( $f^2 = 0.000$ ). The path coefficient of the relationship between FAT and CDMP is positive but not significant. This means that a unit change in financial attitude results in 0.001 changes in the control and decision-making power of WMEs. Thus, financial attitude does not have any effect on their control and decision-making power. Therefore, the hypothesis “financial attitude influences control and decision-making power of women micro-entrepreneurs” was not supported.

***H1f: Financial awareness positively influences financial well-being***

Moreover, Table 14 and Figure 3 indicate that it has a significant and positive influence on financial well-being (Beta= 0.166;  $p= 0.019$ ) with a small effect size ( $f^2 = 0.023$ ). The path coefficient of the relationship between FAW and FWB is positive and significant. Thus, the hypothesis on financial

awareness and financial well-being is supported. This means that financial awareness of Women Micro-entrepreneurs (WMEs) influences their financial well-being with a small to medium effect size.

***H1g: Financial knowledge positively influences financial well-being***

Again, the path results depict that there is a significant positive effect of financial knowledge on financial well-being (Beta= 0.134;  $p= 0.007$ ) with a small effect size ( $f^2 = 0.019$ ). The path coefficient of the relationship between FKN and CDMP is positive and significant. Thus, the hypothesis that financial knowledge influences financial well-being is cannot be rejected. This means that when the financial knowledge of WMEs increases, their financial well-being also increases by 13 percent.

***H1h: Financial skills positively influence financial well-being***

The sixth hypothesis examines the influence of financial skills on financial well-being. Table 14 and Figure 3 depict that financial skills significantly and positively influence financial well-being (Beta= 0.117;  $p= 0.028$ ;  $P < 0.05$ ) with effect size ( $f^2 = 0.017$ ). The path coefficient of the relationship between FSK and CDMP is positive and significant. This means that as the financial skills of MWEs increase, their financial well-being also increases. When WMEs can implement their financial knowledge, both actual and perceived, they become satisfied with their present and final financial conditions.

***H1i: Financial behaviour positively influences financial well-being***

Moreover, financial behaviour significantly and positively influences financial well-being (Beta= 0.305;  $p= 0.001$ ) with a small effect size ( $f^2 = 0.106$ ). The path coefficient of the relationship between FBH and CDMP is

positive and significant. An increase in the financial behaviour of WMEs increases their financial well-being. Thus, the hypothesis is supported. Practising responsible financial behaviour leads to better financial well-being

***H1j: Financial attitude positively influences financial well-being***

Also, financial attitude is not a significant predictor of the financial well-being of women micro-entrepreneurs (Beta= 0.126;  $p = 0.101$ ;  $p > 0.05$ ) with no effect size ( $f^2 = 0.016$ ). The path coefficient of the relationship between FAT and CDMP is positive but not significant. A unit change in financial attitude resulted in a 0.126 change in their financial well-being. This did not support the hypothesis that “financial attitude influences financial well-being of women micro-entrepreneurs”. It means that respondents’ beliefs in savings, mobile banking and preparing budgets do not influence their financial well-being.

**Table 15: Coefficient of Determination and Predictive Relevance of FL and Economic Empowerment**

	R-square	R-square adjusted	$Q^2$
Control and decision-making power	0.914	0.913	0.911
Financial well-being	0.196	0.185	0.149

Source: Field survey, (2022)

**Coefficient of Determination and Predictive Relevance ( $Q^2$ )**

Table 15 depicts information on the coefficient of determination ( $R^2$ ) and Predictive Relevance of the model. The Coefficient of determination measures how the independent variables explain the proportion of variations in the dependent variable (Zhang, 2017). Thus, it measures how financial awareness, financial attitude, financial knowledge, financial skills and

financial behaviour explain the amount of variance in control and decision-making power as well as financial well-being. The information in Table 15 shows the coefficient of determination ( $R^2 = 0.914$ ) for control and decision-making power and (0.196) for financial well-being.

This means that 91.4% of the variations in control and decision-making power of Women micro-entrepreneurs are explained by financial awareness, financial attitude, financial knowledge, financial skills and financial behaviour. In the same way, 19.6% of the financial well-being of women micro-entrepreneurs is also explained by financial literacy variables. The predictive power of financial literacy and control and decision-making power model, financial literacy and financial well-being model are substantially good and can be used in a sample drawn from the same population for predictive purposes.

In determining the accuracy of predictive relevance of a model, it is also important to evaluate the magnitude of the  $R^2$  by using Stone-Geisser's  $Q^2$  value (Geisser, 1973; Stone, 1974). Table 15 indicates that the predictive relevance of financial literacy and control and decision-making power model is greater than zero ( $Q^2 = 0.911$ ). Also, the predictive relevance of the financial literacy and control and financial well-being model is greater than zero ( $Q^2 = 0.149$ ). This means that the model predicting control and decision-making has greater predicting relevance than the model predicting financial well-being.



financial decision-making. Similarly, Khan and Suriseti (2022) concluded that financial awareness influenced decision-making. On poverty reduction, Kuruvilla and Harikumar (2018) concludes that women entrepreneurs with high level of financial awareness are able to grow their businesses and reduce poverty. The effect size of FAW on CDMP is between small to medium ( $f^2 = 0.049$ ), meaning that, the removal of FAW will cause a small to medium effect on the control and decision-making power of women micro entrepreneurs.

In the second hypothesis of objective one (H1b), financial knowledge positively and significantly influences control and decision-making power ( $\beta = 0.924$ ;  $p = 0.000$ ). This implies that when women micro-entrepreneurs acquire knowledge about risk diversification, inflation, time value of money and budgeting, their decision-making power is improved. Kumari et al. (2020) asserted that when women have knowledge of budgeting, they can prepare it, thereby increasing their control of income and expenditure. A study by Dewi et al. (2020) corroborated the findings of Kumari et al. (2020) and is dependable with the conclusions of this investigation. The effect size of FKN on CDMP is large ( $f^2 = 0.367$ ), meaning that, the omission of FKN has large effect on CDMP.

In terms of decision-making power, financial knowledge plays a vital role by equipping the individual with the knowledge to distinguish between bad and good financial decisions (Greenberg & Hershfield, 2019; Lusardi, 2012). With financial knowledge, WMEs can decide on saving options and have the power to get ownership of assets. Also, the investigation by Kumari et al. (2020) specified that financial knowledge has a significant effect on the

economic decision-making ability of women in rural areas of Sri Lanka. Nigam et al. (2018) corroborated the positive influence of financial knowledge on decision-making by indicating that the use of subjective and objective financial knowledge in decision-making results in sound decisions.

The hypothesis of objective one (H1c) deals with the effect of financial skills on control and decision-making power. The relationship between FSK and CDMP (Beta= 0.020;  $p= 0.195$ ;  $p>0.05$ ) was found not to be significant. This implies that, even though WMEs may have financial skills, they will not be useful in preparing and managing budgets as well as deciding investment options. This is contrary to the findings of Iram et al. (2023), who stated that financial skills influence investment decisions and money management. The insignificant influence of financial skills on WMEs' control and decision-making may be due to their low educational background. The effect size of FSK on CDMP ( $f^2 = 0.005$ ), implies that, FSK has no effect on control and decision-making power of women micro entrepreneurs.

The hypothesis of objective one (H1d), dealing with the effect of FBH on CDMP was supported ( $\beta= 0.033$ ;  $p= 0.043$ ). However, the effect size ( $f^2 = 0.011$ ) shows that there is no effect of financial behaviour on control and decision-making power. Practical implication is that when WMEs adopt responsible financial behaviour, it has negligible effect on their decision-making. In other words, it means that a unit change in financial behaviour results in a 0.033 change in the control and decision-making of WMEs. This change (0.033), however small, is significant ( $p= 0.043$ ), and such a situation is common with a large sample size (Hair et al., 2019). This study agreed with the findings of Kumari et al., (2020), which indicated that financial behaviour



positively influences the decision-making power of the rural poor of Indonesia. Similarly, research by Sudindra and Naidu (2018) opined that financial behaviour positively impacted the investment decision-making of investors in India.

The hypothesis one (H1e); “Financial attitude positively influences control and decision-making power” is not supported ( $= 0.001$ ;  $p = 0.971$ ;  $p > 0.05$ ). This implies that financial attitude of women micro entrepreneurs has no effect on their control and decision-making power as confirmed by the effect size ( $f^2 = 0.000$ ). Financial attitude involves the belief in financial concepts such as savings, borrowing, budgeting and investment. FAT does not cause financial decision making of women micro entrepreneurs to improve. This finding is inconsistent with the study by Rasheed and Saddique (2019), where the authors found that financial attitude influence women entrepreneurs financial decision-making. However, empowerment theory stipulates otherwise. Again, the finding of Niazi and Malik (2019), which indicate that financial attitude significantly influences investment decision-making, is inconsistent with the study’s finding.

From Table 14, the path coefficient between FAW and FWB, FKN and FWB, FSK and FWB, FBH and FWB as well as FAT and FWB were found to be positive. The p-values of these relationships, with the exception of FAT and FWB were found to be significant. This implies that, apart from the relationship between FAT and FWB, the study found positive significant relationships between these pairs of variables.

The significant positive relationship between FAW and FWB is supported by the findings of Dewi et al. (2020), which revealed that financial

awareness influences financial well-being. When individuals become aware of financial terms such as inflation, interest rate and investment risk, they can inquire about more information from their social network to improve their business performance. Consequently, they are likely to save some of their business income, which guarantees them future financial security. Similarly, a study by Pandey et al. (2020) specified that financial awareness affects the financial well-being of young adults. Concerning effect size, FAW has small to medium effect size ( $f^2 = 0.023$ ). This means that the presence of FAW has little practical implication on FWB of women micro entrepreneurs.

The significant positive effect of FKN on FWB implies that financial knowledge of WMEs increases their financial well-being. This is supported by Oquaye, Owusu and Bokpin (2022) who found that when have financial knowledge, it translates into financial well-being. Similarly, the findings of Agyei (2018) revealed that SME owners' financial knowledge has a significant influence on their financial well-being. When Women Micro-entrepreneurs know of risk and returns, cost of borrowing, diversification and other financial concepts, they tend to invest prudently and save some of their business profit and consequently improve their financial well-being (Mahdzan et al., 2022; Lusardi, 2012; Singla & Mallick, 2021). However, if individuals have financial knowledge but it is not translated into financial behaviour, there may not be any impact on their financial well-being. This is corroborated by Ali and Talha (2022) findings, which indicated that financial knowledge with corresponding financial behaviour has an impact on financial well-being.

Also, concerning the connection amid FSK and FBH, a significant positive association was found. When WMEs put into practice their financial

skills, they become satisfied with their present and future financial conditions. Consistent with this finding is the study of Kumari et al. (2020), which indicated that the financial skills of rural poor women positively influence their financial well-being as they can use their skills to save some money for future use.

Empirical literature suggested that financial skills positively influence financial well-being (Kumari et al., 2020; Dewi et al., 2020; Khan et al., 2022; Lusardi, 2019). However, Khan et al. (2022) indicated that possessing financial skills alone does not translate into better financial well-being. The reason is that one may have the ability to prepare a budget, but if she or he fails to do so, expenditure cannot be controlled and can lead to financial difficulties, which may end up in poor financial well-being.

Again, a positively significant effect of FBH on FWB was found, implying that the financial behaviour of women micro-entrepreneurs improves their FWB. Thus, the results of the study are consistent with the findings of Rahman et al. (2021), who found that financial behaviour impacts positively on financial well-being of low-income groups in Malaysia. When entrepreneurs save some of their business profit, they are likely to meet some future financial obligations (Sabri et al. 2020) and enjoy a social life. Adam et al. (2017) supported the findings by concluding that financial literacy influences financial well-being. Again, She et al. (2021) findings explained that financial behaviour influences financial well-being, and it is reliable with the conclusions of this investigation.

The effect of FAT on FWB, was not found to be significant. The implication is that when people believe that savings and investment can

contribute to their financial well-being and they do not save or invest, their financial well-being may not be better. In contrast, the conclusions of Xiao et al. (2014), Van Rooij et al. (2011) as well as Haque and Zulfiqar (2016) revealed that there is a significant positive connection amid financial attitude and financial well-being. Similarly, Agyei et al. (2019) findings also indicated that financial attitude significantly influences the financial well-being of SME owners.

### **Moderating Role of SN in the Relationship amid FL and Control and Decision-Making Power (CDMP)**

The second objective is to scrutinize the moderating role of social networks in the connection amid financial literacy as well as the economic empowerment of women micro-entrepreneurs. Economic empowerment as a dependent construct has two variables: financial well-being and control and decision-making power. The first part of the moderating evaluation deals with the social network moderating role in the nexus between financial literacy and control and decision-making power.

### **Measurement Model Assessment**

The indicators used for the constructs were based on a reflective measurement model, hence the reflective measurement specifications used for outer model analysis. The following were considered in the measurement model assessment: Cronbach alpha, rho\_A as well as composite reliability for internal consistency reliability, Average Variance Extracted (AVE) for convergent validity and Heterotrait-Monotrait (HTMT) ratio for discriminant validity. Also, indicator reliability was assessed using the outer/indicator loadings.

**Table 16: Internal Consistency Reliability of the Moderating Role of SN in the Relationship between FL and CDMP**

Constructs	Cronbach's alpha	rho_A	Composite Reliability
Control and decision-making power	0.867	0.925	0.907
Financial attitude	0.743	0.847	0.729
Financial awareness	0.771	0.786	0.853
Financial behaviour	0.731	0.778	0.840
Financial knowledge	0.750	0.830	0.811
Financial skills	0.864	0.764	0.804
Social network	0.804	0.807	0.872

Source: Field Survey (2023)

**Internal Consistency Reliability**

Cronbach alpha, rho\_A, and composite reliability were internal consistency reliability measures used for the outer model as indicated in Table 16. Hair et al., (2019), suggest that Cronbach alpha exceeding 0.7 is considered acceptable for internal consistency. Information from Table 16 indicates that Cronbach alpha of all the constructs exceeds 0.7 meaning that they satisfy the minimum threshold. All the measures for rho\_A have values greater than 0.7, which also means that the indicators measure the constructs reliably. Also, the composite reliability has scores greater than 0.7, suggesting that internal consistency is met.

**Table 17: Outer Loading of the Moderating Role of SN in the Relationship between FL and CDMP**

Indicators	Loadings	T stat	P values
CDMP1 <- Control and decision-making power	0.725	14.969	0.000
CDMP3 <- Control and decision-making power	0.833	22.947	0.000
CDMP5 <- Control and decision-making power	0.916	69.526	0.000
CDMP6 <- Control and decision-making power	0.884	61.284	0.000
FAT2 <- Financial attitude	0.772	5.283	0.000
FAT3 <- Financial attitude	0.483	2.00	0.004
FAT5 <- Financial attitude	0.788	4.564	0.000
FAW1 <- Financial awareness	0.808	16.038	0.000
FAW2 <- Financial awareness	0.768	14.823	0.000
FAW3 <- Financial awareness	0.797	15.190	0.000
FAW5 <- Financial awareness	0.701	10.355	0.000
FBH1 <- Financial behaviour	0.739	10.210	0.000
FBH3 <- Financial behaviour	0.786	13.464	0.000
FBH5 <- Financial behaviour	0.866	19.746	0.000
FKN1 <- Financial knowledge	0.933	2.462	0.014
FKN2 <- Financial knowledge	0.658	1.964	0.05
FKN5 <- Financial knowledge	0.693	2.065	0.039
FSK2 <- Financial skills	0.758	4.433	0.000
FSK3 <- Financial skills	0.736	3.722	0.000
FSK5 <- Financial skills	0.784	4.154	0.000
SN6 <- Social network	0.816	18.084	0.000
SN7 <- Social network	0.836	18.979	0.000
SN8 <- Social network	0.812	20.095	0.000
SN9 <- Social network	0.707	11.206	0.000
Social network x Financial knowledge -> Social network x Financial knowledge	1.000	0.000	0.000
Social network x Financial attitude -> Social network x Financial attitude	1.000	0.000	0.000
Social network x Financial awareness -> Social network x Financial awareness	1.000	0.000	0.000
Social network x Financial behaviour -> Social network x Financial behaviour	1.000	0.000	0.000
Social network x Financial skills -> Social network x Financial skills	1.000	0.000	0.000

Source: Field Survey (2023)

Therefore, the internal consistency reliability of financial literacy, social network and control and decision-making power constructs have been established based on the values of Cronbach alpha, rho\_A and composite reliability meeting the minimum threshold of 0.4.

### Indicator Reliability

Table 17 depicts that there is indicator reliability for all the financial literacy variables, control and decision-making power variables and social network variables. Hair et al. (2019) asserted that factor loadings should be 0.7 or above. However, Hair et al. (2021) indicated that factor loading of 0.4 is considered the minimum for indicator reliability. Except for FAT3 (0.483), FKN2 (0.658), and FKN 5 (0.693), all the factor loadings are above 0.70, meaning that the indicators are reliable for the study.

**Table 18: Convergent Validity of the Moderating Role of SN in the Relationship amid FL and CDMP**

Constructs	Average variance extracted (AVE)
Control and decision-making power	0.710
Financial attitude	0.683
Financial awareness	0.592
Financial behaviour	0.638
Financial knowledge	0.595
Financial skills	0.577
Social network	0.631

Source: Field Survey (2023)

### Convergent Validity

One of the validity indicators is convergent validity, and it is measured using Average Variances Extracted (AVE). As indicated in Table 18, the convergent validity of the indicators was measured using Average Variance Extracted (AVE). All the AVE values were greater than 0.5, suggesting adequate convergent validity (dos Santos & Cirillo, 2023). Hair et al. (2019) stated that in testing convergent validity, the AVE of the latent variables should be 0.5 or above. Table 18 portrayed that all the AVE values of the constructs were greater than 0.5 ranging between 0.577 and 0.710, suggesting that convergent validity is adequate (dos Santos & Cirillo, 2023).

**Table 19: HTMT of the Moderating Role of SN in the Relationship between FL and CDMP**

	CDMP	FAT	FAW	FBH	FKN	FSK	SN	SN x FKN	SN x FBH	SN x FAW	SN x FSK	SN x FAT
CDMP												
FAT	0.180											
FAW	0.294	0.233										
FBH	0.340	0.277	0.316									
FKN	0.051	0.137	0.464	0.064								
FSK	0.159	0.108	0.075	0.142	0.065							
SN	0.300	0.190	0.200	0.377	0.057	0.135						
SN x FKN	0.043	0.065	0.076	0.095	0.071	0.069	0.297					
SN x FBH	0.218	0.109	0.202	0.472	0.040	0.128	0.489	0.216				
SN x FAW	0.319	0.092	0.182	0.306	0.074	0.051	0.321	0.030	0.588			
SN x FSK	0.076	0.173	0.063	0.194	0.041	0.035	0.173	0.053	0.313	0.133		
SN x FAT	0.085	0.189	0.086	0.147	0.040	0.164	0.133	0.039	0.308	0.329	0.216	

Source: Field Survey (2023)



### **Discriminant Validity**

Even though cross-loadings, Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) are used in measuring discriminant validity, the study resorted to HTMT because it overcomes the weaknesses of cross-loadings and Fornell-Larcker criterion (Henseler et al., 2015). According to Henseler et al. (2015), modern studies recommend HTMT as the best measure because Fornell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity.

Table 19 represents HTMT in a correlation matrix form, indicating the discriminant validity of financial literacy, social network and control and decision-making power constructs in the model. The matrix arranged financial literacy, social network and control and decision-making power constructs in rows and columns to provide a correlation coefficient in a diagonal form. A discriminant validity issue arises when the value is greater than 0.90. A value of 0.85 is considered acceptable. As shown in Table 19, all the correlation coefficients are less than 0.85, indicating that there is no discriminant issue. This implies that the constructs are appropriate in the measurement model.

### **Structural Model Assessment of Moderating Role of SN in the Relationship amid FL and CDMP**

According to Hair et al. (2019), structural model evaluation should begin with an assessment of collinearity of the predictor variables. Therefore, before evaluating the path coefficient, effect size ( $f^2$ ), predictive relevance ( $Q^2$ ) and explained variance ( $R^2$ ), an assessment of collinearity was conducted.

**Table 20: Inner VIF of the Moderating Role of SN in the Relationship between FL and CDMP**

	Control and decision-making power
Control and decision-making power	
Financial attitude	1.099
Financial awareness	1.204
Financial behaviour	1.336
Financial knowledge	1.122
Financial skills	1.029
Social network	1.345
Social network x Financial knowledge	1.163
Social network x Financial behaviour	2.143
Social network x Financial awareness	1.689
Social network x Financial skills	1.166
Social network x Financial attitude	1.248

Source: Field Survey (2023)

**Multicollinearity Assessment**

In ensuring that financial awareness, financial knowledge, financial attitude, financial behaviour, financial skills and social network variables do not correlate highly to explain control and decision-making power, the Variance Inflated Factor (VIF) for each of the variables was assessed. Hair et al., (2021) posited that a VIF value greater than or equal to 3 indicates a collinearity problem. As depicted in Table 20, there were no multicollinearity problems with financial awareness, financial attitude, financial knowledge, financial behaviour and financial skills as the inner VIF were less than the maximum threshold of 3.

## Hypotheses of Moderating Role of SN in the Relationship between FL and CDMP

The following hypotheses were put forward for the evaluation of the moderating role of social networks in the relationship amid financial literacy and control and decision-making power:

*H2a: Social network positively moderates the relationship amid financial awareness and control and decision-making power*

*H2b: Social network positively moderates the relationship amid financial knowledge and control and decision-making power*

*H2c: Social network positively moderates the relationship amid financial skills and control and decision-making power*

*H2d: Social network positively moderates the relationship amid financial behaviour and control and decision-making power*

*H2e: Social network positively moderates the relationship amid financial attitude and control and decision-making power.*

**Table 21: Significance of Moderating Effect of SN on the Link between FL and CDMP**

Hypotheses	Beta	Standard deviation	T statistics	P values
SN -> CDMP	0.177	0.062	2.879	0.004
H2a: SN x FAW -> CDMP	0.207	0.091	2.270	0.023
H2b: SN x FKN -> CDMP	0.101	0.086	1.177	0.239
H2c: SN x FBH -> CDMP	0.020	0.073	0.280	0.779
H2d: SN x FSK -> CDMP	0.067	0.072	0.935	0.350
H2e: SN x FAT -> CDMP	0.052	0.059	0.874	0.382

Source: Field Survey (2023)

*H2a: Social network positively moderates the relationship amid financial awareness and control and decision-making power*

According to Hair et al (2021), the influence of the moderator on the exogenous variable is important as it controls for the direct effect of the

moderator on the exogenous construct and without it, the moderating effect would be inflated. Therefore, the significant effect of social networks on control and decision-making power should be considered before the analysis and discussion of the moderating hypotheses. As depicted in Table 21, social network positively and significantly influences control and decision-making power (Beta = 0.177;  $p=0.004$ ). The analysis and discussion of the moderating role of social networks on the association amid financial literacy variables and control and decision-making power are analysed in the ensuing hypotheses.

Hypothesis H2a in Table 21 portrays that social networks positively and significantly moderate the association amid financial awareness and control and the decision-making power of women micro-entrepreneurs (Beta=0.207;  $p=0.023$ ). H2a is therefore supported, meaning that the influence of social networks on the connection amid financial literacy variables and the control and decision-making power of WMEs is significant. Through their participation in social network activities, WMEs become aware of savings, borrowing, insurance and interest rates.

***H2b: Social network positively moderates the relationship amid financial knowledge and control and decision-making power.***

In table 21, hypothesis 2b portrays how social network moderates the relationship between financial knowledge and control and decision-making power. From the Table, social networks did not significantly moderate the connection between financial knowledge and control and decision-making power of Women micro-entrepreneurs (WMEs) in Accra Metropolis (Beta=0.101;  $p=0.239$ ). Therefore, the hypothesis is not supported. This implies that changes in the social network of WMEs have an insignificant

effect on the association amid their financial knowledge and control and decision-making power.

***H2c: Social network positively moderates the relationship amid financial behaviour and control and decision-making power***

Hypothesis H2c clearly shows that social network does not significantly moderate the association amid financial behaviour and control and decision-making power of women micro-entrepreneurs (WMEs) in Accra Metropolis (Beta=0.020; p=0.779). Thus, the hypothesis is not supported. This means that changes in the social network of WMEs do not change the relationship amid their financial behaviour and control and decision-making power. This implies that social network is less relevant in the nexus amid financial behaviour and control and decision-making of WMEs in the Accra Metropolis

***H2d: Social network positively moderates the relationship amid financial skills and control and decision-making power.***

As indicated in Table 21, hypothesis H2d reveals that social networks did not significantly moderate the connection between financial skills and control and decision-making power of Women micro-entrepreneurs (WMEs) in Accra Metropolis (Beta=0.067; p=0.350). Thus, the hypothesis was not supported. This finding suggests that social network is less significant in moderating the relationship between financial skills and control and decision-making power of WMEs. This means that a change in the social network of WMEs would not have much influence on the association amid their financial skills and control and decision-making power.

***H2e: Social network positively moderates the relationship amid financial attitude and control and decision-making power.***

H2e is the last hypothesis and centres on how social network moderates the association amid financial attitude and control and decision-making power. As indicated in Table 21, social networks did not significantly moderate the nexus between financial attitude and control and decision-making power of Women micro-entrepreneurs (WMEs) in Accra Metropolis (Beta=0.052; p=0.382). The hypothesis was not supported. The meaning is that when there is a change in social networks, WMEs' control and decision-making power are not affected by their beliefs in savings, borrowing and investment

**Table 22: Effect Size of SN on the Link between FL and CDMP**

	CDMP
SN x FAW	0.042
SN x FKN	0.008
SN x FBH	0.009
SN x FSK	0.000
SN x FAT	0.002

Source: Field Survey (2023)

### **Effect Size ( $f^2$ )**

Hair et al. (2019) emphasised the importance of effect size ( $f^2$ ) in the interpretation of the moderating model. Thus,  $f^2$  indicates the extent to which the moderator variable contributes to the explanation of the dependent variable. As shown in Table 22, the moderating effect of social networks on the relationship between financial awareness and control and decision-making power is small to medium ( $f^2 = 0.042$ ). This means that using Kim and Cohen's

(1998)  $f^2$ , the social network has a small to medium effect on financial awareness and control and decision-making power relationship. There is no effect for the rest of the relationships as they all have ( $f^2$ ) less than the minimum threshold of 0.02.

However, Aguinis et al. (2017) argued that moderating effects in moderation models are normally low and suggested 0.009 as the average moderating effect size. Against this backdrop, Kenny and Judd (2016) recommended 0.005, 0.01 and 0.025 as small, medium and large effect sizes, respectively. Therefore, based on Kenny and Judd (2019) recommendation, the social network has a large moderating effect on the relationship between financial awareness and control and decision-making power and small effect on the association amid financial attitude and control and decision-making power.

**Table 23: Co-efficient of Determination and Predictive Relevance of the Moderating Role of SN in the Relationship amid FL and CDMP**

	R-square	R-square adjusted	$Q^2$
Control and decision-making power	0.226	0.204	0.112

Source: Field Survey (2023)

#### **Co-efficient of Determination and Predictive Relevance**

Table 23 and Figure 4 indicate that the predictor variables (financial awareness, financial attitude, financial behaviour, financial knowledge and financial skills) and the moderating variable (social network) given its moderating effect, jointly account for 22.6% of variations in control and decision-making power. Also, the table suggests that the predictive relevance of financial literacy, control, decision-making power and social network model is greater than zero ( $Q^2 = 0.112$ ). The implication is that with the

introduction of social networks as a moderator, the model has 11.2% predictive power.

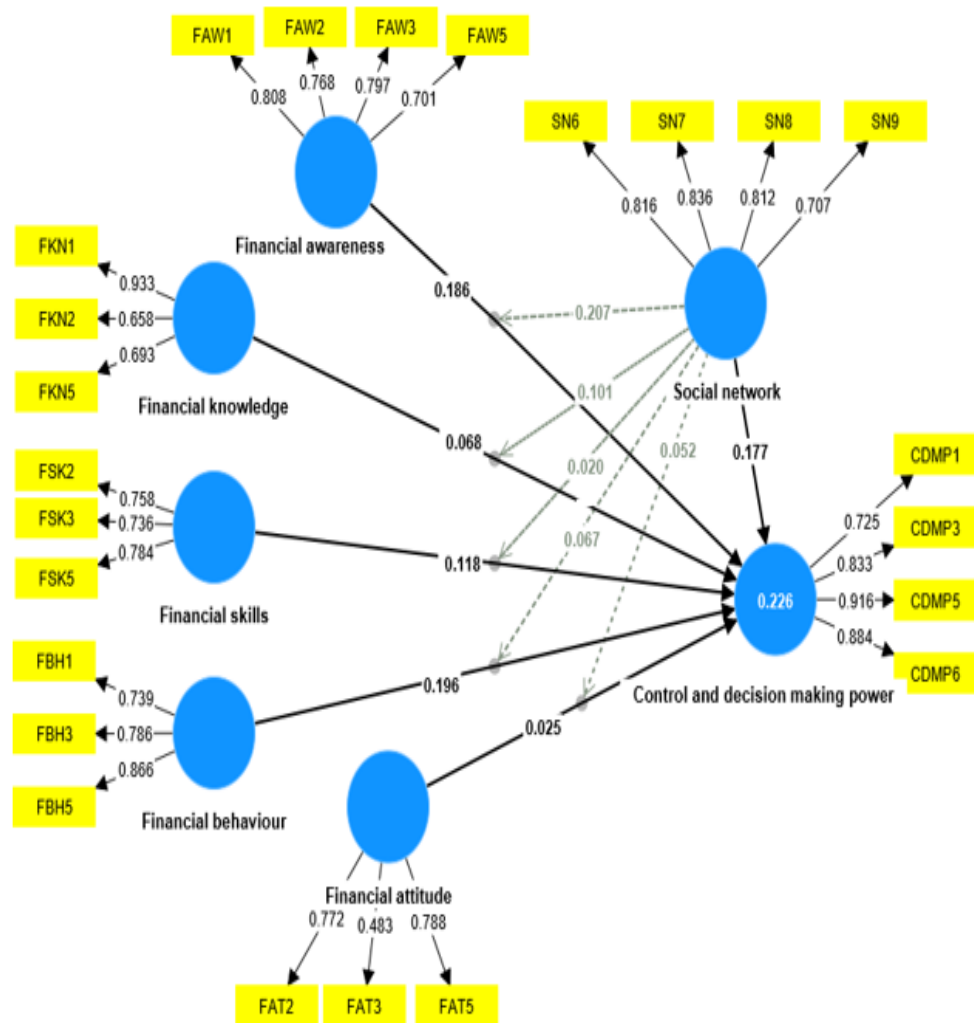


Figure 4: Social Network as a moderator between FL and CDMP  
Source: Field survey, (2023).

### Moderating Role of SN in the Relationship amid FL and Financial Well-being (FWB)

This is the second section of the moderating role of social networks in the connection amid financial literacy as well as economic empowerment of women micro-entrepreneurs. As the first part concerned control and decision-making power, a component of economic empowerment, this part deals with



financial well-being, which is also a variable in the economic empowerment construct.

### Measurement Model

The measurement model considered Cronbach alpha, rho\_A and composite reliability for internal consistency reliability, Average Variance Extracted (AVE) AVE for convergent validity and Heterotrait-Monotrait (HTMT) ratio for discriminant validity. Also, indicator reliability was assessed using the outer/indicator loadings.

**Table 24: Internal Consistency Reliability of the Moderating Role of SN in the Relationship amid FL and FWB**

Constructs	Cronbach's alpha	rho_A	Composite reliability
Financial attitude	0.732	0.790	0.728
Financial awareness	0.771	0.795	0.852
Financial behaviour	0.731	0.771	0.840
Financial knowledge	0.750	0.789	0.850
Financial skills	0.735	0.754	0.801
Financial well-being	0.882	0.919	0.912
Social network	0.804	0.805	0.872

Source: Field Survey (2023)

### Internal Consistency Reliability

From Table 24, Cronbach alpha, rho\_A, and composite reliability are internal consistency reliability measures for the outer model. Hair et al. (2019), suggest that Cronbach alpha exceeding 0.7 is considered acceptable for internal consistency. Information from Table 24 indicates that Cronbach alpha for all the constructs exceeds 0.7, meaning that they satisfy the minimum threshold. All the measures for rho\_A in the same Table have values greater than 0.7, which also means that the indicators measure the constructs reliably. Also, the composite reliability has scores greater than 0.7, suggesting

that internal consistency is met. Therefore, the internal consistency reliability of financial literacy, social network and financial well-being constructs are established.

**Table 25: Outer Loading of the Moderating Role of SN in the Relationship between FL and FWB**

Indicators	Loadings	T stat	P values
FAT2 <- Financial attitude	0.780	6.649	0.000
FAT3 <- Financial attitude	0.444	1.927	0.054
FAT5 <- Financial attitude	0.808	6.037	0.000
FAW1 <- Financial awareness	0.821	19.449	0.000
FAW2 <- Financial awareness	0.768	14.787	0.000
FAW3 <- Financial awareness	0.788	15.389	0.000
FAW5 <- Financial awareness	0.693	10.513	0.000
FBH1 <- Financial behaviour	0.731	10.735	0.000
FBH3 <- Financial behaviour	0.797	15.706	0.000
FBH5 <- Financial behaviour	0.860	22.220	0.000
FKN1 <- Financial knowledge	0.825	2.444	0.015
FKN2 <- Financial knowledge	0.783	2.727	0.006
FKN5 <- Financial knowledge	0.818	2.953	0.003
FSK2 <- Financial skills	0.738	4.551	0.000
FSK3 <- Financial skills	0.715	3.946	0.000
FSK5 <- Financial skills	0.817	4.842	0.000
FWB1 <- Financial well-being	0.670	12.771	0.000
FWB2 <- Financial well-being	0.794	18.057	0.000
FWB3 <- Financial well-being	0.894	45.187	0.000
FWB6 <- Financial well-being	0.898	68.826	0.000
FWB7 <- Financial well-being	0.838	34.710	0.000
SN6 <- Social network	0.814	18.067	0.000
SN7 <- Social network	0.830	18.805	0.000
SN8 <- Social network	0.813	21.091	0.000
SN9 <- Social network	0.714	12.342	0.000
Social network x Financial knowledge ->	1.000	0.000	0.000
Social network x Financial knowledge			
Social network x Financial behaviour ->	1.000	0.000	0.000
Social network x Financial behaviour			
Social network x Financial attitude ->	1.000	0.000	0.000
Social network x Financial attitude			
Social network x Financial awareness ->	1.000	0.000	0.000
Social network x Financial awareness			
Social network x Financial skills -> Social network x Financial skills	1.000	0.000	0.000

Source: Field Survey (2023)

### Indicator Reliability

With the introduction of social networks as a moderator in the association amid financial literacy and financial-wellbeing, the outer loadings depict that there is indicator reliability. Hair, Risher, Sarstedt and Ringle (2019) asserted that factor loadings should be 0.7 or above. However, Hair et al., (2019) indicated that a factor loading of 0.4 is considered minimum for indicator reliability. Table 25 portrays that except for FAT3 (0.444), FAW5 (0.693) and FWB1 (0.670), all the indicators have factor loadings exceeding 0.7.

**Table 26: Average Variance Extracted (AVE) of the Moderating Role of SN in the Relationship between FL and FWB**

Constructs	AVE
Financial attitude	0.586
Financial awareness	0.591
Financial behaviour	0.637
Financial knowledge	0.654
Financial skills	0.574
Financial well-being	0.678
Social network	0.630

Source: Field Survey (2023)

### Convergent Validity

Average Variances Extracted (AVE) was employed in measuring convergent validity. According to Hair et al., (2019) in testing convergent validity, the AVE of the latent variables should be 0.5 or above. Table 26 indicates that all the AVE values of the constructs were greater than 0.5, ranging between 0.574 and 0.678, suggesting that convergent validity is adequate (dos Santos & Cirillo, 2023). This means that all the variables are related to measuring the constructs.

**Table 27: HTMT of the Moderating Role of SN in the Relationship between FL and FWB**

	FAT	FAW	FBH	FKN	FSK	FWB	SN	SN x FAW	SN x FKN	SN x FBH	SN x FSK	SN x FAT
FAT												
FAW	0.233											
FBH	0.277	0.316										
FKN	0.137	0.464	0.064									
FSK	0.108	0.075	0.142	0.065								
FWB	0.199	0.293	0.381	0.072	0.166							
SN	0.190	0.200	0.377	0.057	0.135	0.315						
SN x FAW	0.092	0.178	0.302	0.079	0.051	0.319	0.323					
SN x FKN	0.058	0.093	0.085	0.083	0.076	0.038	0.263	0.040				
SN x FBH	0.107	0.201	0.471	0.040	0.129	0.217	0.487	0.584	0.198			
SN x FSK	0.173	0.061	0.187	0.040	0.036	0.088	0.184	0.129	0.012	0.300		
SN x FAT	0.186	0.084	0.152	0.040	0.164	0.098	0.137	0.323	0.028	0.312	0.229	

Source: Field Survey (2023)

### **Discriminant Validity**

Heterotrait-Monotrait (HTMT) was used in examining discriminant validity. Even though there are other forms of measurements such as cross-loadings and the Fornell-Larcker criterion, HTMT is the best measure of discriminant validity (Henseler et al., 2015) because it overcomes the weaknesses of cross-loading and Fornell-Larcker criterion. According to Henseler et al. (2015), modern studies recommend HTMT as the best measure because Fornell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity.

Table 27 represents HTMT in a correlation matrix form, indicating the discriminant validity of financial literacy, social network and financial well-being constructs in the model. Discriminant issues arise when the value is greater than 0.90, whereas a value of 0.85 is considered acceptable. From Table 27, all the correlation coefficients are less than 0.85, indicating that there are no discriminant issues. This implies that the constructs are appropriate in the measurement model.

### **Structural Model Assessment**

The following were considered in the structural model evaluation: Collinearity, path coefficient, effect size ( $f^2$ ), predictive relevance ( $Q^2$ ) and explained variance ( $R^2$ )

**Table 28: Multicollinearity Assessment (Inner VIF) of the Moderating Role of SN in the Relationship amid FL and FWB**

	VIF
FAT	1.093
FAW	1.251
FBH	1.335
FKN	1.164
FSK	1.029
SN	1.329
SN x FAW	1.682
SN x FKN	1.145
SN x FBH	2.115
SN x FSK	1.169
SN x FAT	1.247

Source: Field Survey (2023)

### **Multicollinearity Assessment**

In ensuring that financial awareness, financial knowledge, financial attitude, financial behaviour, financial skills and social network variable do not correlate highly to explain financial well-being, the Variance Inflated Factor (VIF) for each of the variables were assessed. Hair et al. (2021) posited that a VIF value greater than or equal to 3 indicates a collinearity problem. As depicted in Table 28, there are no multicollinearity problems with financial awareness, financial attitude, financial knowledge, financial behaviour and financial skills, as the inner VIFs are less than the maximum threshold of 3.

### **Hypotheses of Moderating Role of SN in the Relationship between FL and FWB**

The following hypotheses were put forward for the evaluation of the moderating role of social networks in the relationship between financial literacy and financial well-being

*H2f: Social network positively moderates the relationship amid financial awareness and financial well-being*

*H2g: Social network positively moderates the relationship amid financial knowledge and financial well-being*

*H2h: Social network positively moderates the relationship amid financial skills and financial-well-being*

*H2i: Social network positively moderates the relationship amid financial behaviour and financial well-being*

*H2j: Social network positively moderates the relationship amid financial attitude and financial well-being*

**Table 29: Significance of Moderating Effect of SN in the Link between FL and FWB**

Hypotheses	Beta	Standard deviation	T statistics	P values
SN -> FWB	0.176	0.059	2.963	0.003
H2f: SN x FAW -> FWB	0.200	0.087	2.284	0.022
H2g: SN x FKN -> FWB	0.073	0.074	0.983	0.326
H2h: SN x FBH -> FWB	0.082	0.064	1.294	0.196
H2i: SN x FSK -> FWB	0.019	0.068	0.280	0.780
H2j: SN x FAT -> FWB	0.020	0.058	0.353	0.724

Source: Source: Field Survey (2023)

*H2f: Social network positively moderates the relationship amid financial awareness and financial well-being*

According to Hair et al. (2017), the influence of the moderator on the exogenous variable is necessary as it controls for the direct effect of the moderator on the exogenous construct and without it, the moderating effect would be inflated. Therefore, the significance should be considered before the

moderating analysis and discussion. As indicated in Table 29, social network significantly influences financial well-being (Beta = 0.176;  $p=0.003$ ).

Concerning the moderating effect, hypothesis 2f in Table 29 indicates that social networks significantly and positively moderate the relationship between financial awareness and financial well-being of women micro-entrepreneurs (Beta=0.200;  $p=0.022$ ). Thus, H2f is supported, meaning that the influence of WME's financial awareness on their financial well-being was enhanced by their social network. When WMEs become aware of the savings and borrowing interest rates through their participation in social networks, and they can save and borrow, their future financial security is enhanced.

***H2g: Social network positively moderates the relationship amid financial knowledge and financial well-being***

The next hypothesis in Table 29 depicts how social network moderates the association amid financial knowledge as well as financial well-being. Social networking has no statistically significant moderating effect on the relationship between financial knowledge and financial well-being (Beta=0.073;  $p=0.326$ ). Therefore, the hypothesis is not supported. The meaning is that a change in the social network of WMEs has a less significant effect on the connection amid their financial knowledge and financial well-being.

***H2h: Social network positively moderates the relationship between financial behaviour and financial well-being***

Hypothesis H2h revealed that social networks did not significantly moderate the relationship between financial behaviour and financial well-being of women micro-entrepreneurs (WMEs) in Accra Metropolis



(Beta=0.0782;  $p=0.196$ ). Therefore, the hypothesis is not supported. The meaning is that changes in the social network of WMEs do not significantly change the relationship between their financial behaviour and financial well-being. By implication, the social network is less relevant in the nexus between financial behaviour and the financial well-being of WMEs in the Accra Metropolis.

***H2i: Social network positively moderates the relationship amid financial skills and financial well-being***

As indicated in Table 29, hypothesis H2i depicts that, social networks did not significantly moderate the connection between financial skills and financial well-being of Women micro-entrepreneurs (WMEs) in Accra Metropolis (Beta=0.019;  $p=0.780$ ). Therefore, the hypothesis was not supported. This finding suggested that the moderating role of social networks in the connection between financial skills and the financial well-being of WMEs was not relevant. It implies that how much their financial well-being is influenced by their financial skills is not affected by their social network.

***H2j: Social network positively moderates the relationship between financial attitude and financial well-being***

The last hypothesis in Table 29 indicates the moderating role of social network in the relationship between financial attitude and financial well-being. The Table indicates that social networking did not significantly moderate the connection between financial attitude and financial well-being of Women micro-entrepreneurs (WMEs) in Accra Metropolis (Beta=0.020;  $p=0.724$ ). Therefore, the hypothesis was not supported. The meaning is that variations in

the social network of WMEs are less relevant in the relationship between their beliefs in savings and borrowing and their financial well-being.

**Table 30: Effect Size of SN on the Link between FL and FWB**

	FWB
SN x FAW	0.041
SN x FKN	0.004
SN x FBH	0.014
SN x FSK	0.000
SN x FAT	0.000

Source: Field Survey (2023)

#### **Effect Size ( $f^2$ )**

Hair et al. (2019) disclosed that effect size ( $f^2$ ) is necessary for the interpretation of the moderating model. The  $f^2$  indicates the extent to which the moderator variable contributes to the explanatory power of the dependent variable. As shown in Table 30, the moderating effect of social networks on the connection amid financial awareness and financial well-being is small ( $f^2 = 0.041$ ). This means that social network contribution to the effect of financial awareness on financial well-being is small to medium. The social network has no moderating effect on financial skills, financial knowledge, financial behaviour and financial attitude relationship with financial well-being.

However, Aguinis et al. (2017) argued that the effect size in moderating models is normally low and suggested 0.009 as the average moderating effect size. Consequently, Kenny and Judd (2019) recommended 0.005, 0.01 and 0.025 as small, medium and large effect sizes, respectively. This means that using Kenny and Judd (2019) recommendation, the social network has a large effect on the association amid financial awareness and

financial well-being. However, it has no effect on the rest of the moderating relationships.

**Table 31: Co-efficient of Determination and Predictive Relevance of the Moderating role of SN in the Relationship amid SN and FWB**

	R-square	R-square adjusted	$Q^2$
Financial well-being	0.249	0.228	0.152

Source: Field Survey (2023)

### **Co-efficient of Determination and Predictive Relevance**

As indicated in Table 31 and Figure 5, financial awareness, financial attitude, financial behaviour, financial knowledge and financial skills as predictor variables, together with the moderating variable (social network), jointly account for 24.9% of positive change in the financial well-being of the respondents. Also, the predictive relevance of financial literacy, social networks and financial well-being model is greater than zero ( $Q^2 = 0.152$ ). This means that with the introduction of social network as a moderator, the model has 15.2% predictive power.

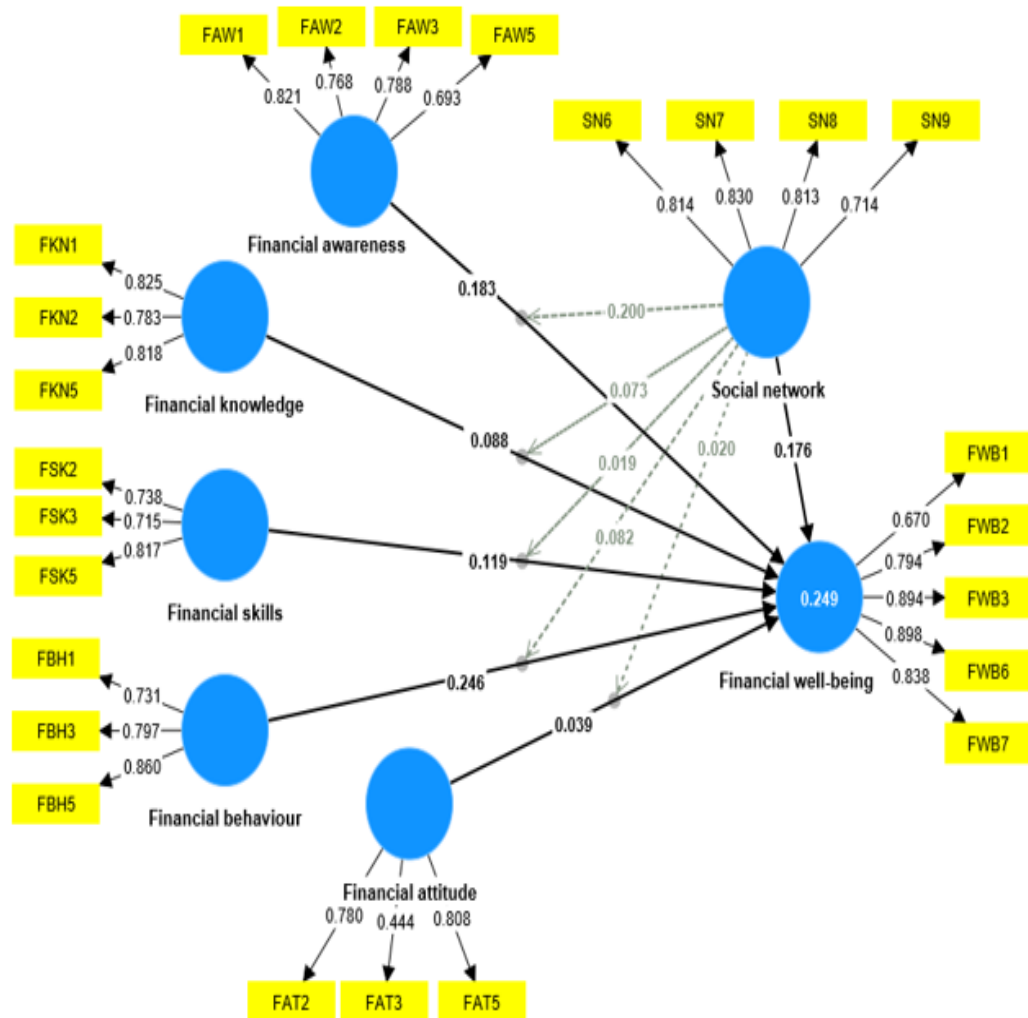


Figure 5: Social Network as a moderator between FL and FWB  
Source: Field survey, (2023).

### Discussion of findings

Hypotheses H2a to H2e and H2f to H2j as depicted in Table 21 and Table 29 respectively deal with the moderating role of Social Network (SN) in the connection between financial literacy and economic empowerment. Concerning H2a, social network significantly moderates the connection between FAW and CDMP (Beta = 0.207;  $p = 0.023$ ). Through their participation in social network activities, WMEs become aware of savings, borrowing, insurance and interest rates. Aguinis et al. (2017) argued that moderating effects in moderation models are normally low and suggested 0.009 as the average moderating effect size. Therefore, Using Kenny et al.

(2019) and Hair et al. (2021) recommendation, SN has a large moderating effect on the relationship amid financial awareness and control and decision-making power ( $f^2 = 0.042$ ) and no effect on the relationship between financial attitude and control and decision-making power ( $f^2 = 0.002$ ).

This means that, the social network has a small to medium effect on financial awareness and control and decision-making power relationship. WMEs' future financial security is enhanced when they save, borrow and invest some of their business profit (Amponsah et al., 2023). This finding is supported by social network theory, which stipulates that social interactions among individuals who are aware of financial terms and concepts such as budget preparation, savings, borrowing and investment tend to increase their control and decision-making power.

Studies on how social network moderates the relationship amid financial awareness, control as well as decision-making have not been sighted. However, a similar study by Bongomin et al. (2018) concluded that social networking moderates the connection amid financial literacy and the financial inclusion of poor households living in rural areas of Uganda. Similarly, Ali et al. (2017) found that social network facilitates economic empowerment of women in Bangladesh.

Concerning H2b, the moderating role of social network on the association amid FKN as well as CDMP was not significant implying that engaging in social network cannot enhance the effect of FKN on CDMP. However, social learning theory states that people learn through interaction with one another, and this increases their financial knowledge and consequently influences their control and decision-making power. In contrast,

this study found that social network is less relevant in financial knowledge and control and decision-making power nexus. There is hardly an empirical study that deals with the moderating effect of social networks on the connection amid financial knowledge and control and the decision-making power of WMEs. However, in a related study conducted by Lichy, Farquhar and Kachour (2021) they found that social network of women entrepreneurs enhances their financial decision-making.

It can be observed from Table 21 that Social Network (SN) has positive but insignificant moderating effect on the connection amid Financial Behaviour (FBH) and Control and Decision-Making Power (CDMP) (Beta=0.020; p=0.779). This implies that social network is less relevant in the nexus amid financial behaviour and control and decision-making of WMEs. However, social network theory and social learning theory postulate that in a social setting, individuals learn and imitate the financial behaviour of members, thereby helping them to have control over their income and expenditure as well as make decisions on savings, borrowing and investment. Even though Kumari et al. (2020) examined the relationship between financial literacy and economic empowerment of rural poor women in Sri Lanka, they did not include social networks as a moderator. However, they found out that financial literacy has a positive influence on economic empowerment.

With regards to hypothesis H2d, the study found positive but insignificant moderating effect of SN on the nexus between FSK and CDMP. This means that a change in the social network of WMEs would not enhance the effect that FSK has on their CDMP. Empirical studies on the moderating role of social networks on the association amid financial skills and control and

decision-making power are yet to found. However, similar work of Bongomin et al. (2018) revealed that social network moderates the connection amid financial literacy as well as financial inclusion.

The findings of H2e is similar to that of H2d. From Table 21, SN has positive as well as insignificant moderating effect on the relationship amid FAT and CDMP. The hypothesis was not supported. The meaning is that when there is a change in social network, WMEs' control and decision-making power is not affected by their beliefs in savings, borrowing and investment. Empirical studies on the moderating role of social networks on the relationship amid financial attitude as well as control and the decision-making power of WMEs have not been sighted.

Hypotheses H2f to H2j deal with the nexus between FL and FWB. As indicated in H2f, SN significantly as well as positively moderate the relationship amid FAW as well as FWB of women micro-entrepreneurs (Beta=0.200; p=0.022). This implies that the effect of FAW on FWB is strengthened by social net of the women micro-entrepreneurs. SN has a large moderating effect on the relationship amid financial awareness and financial well-being ( $f^2 = 0.041$ ) meaning that the omission of social network would result in a large effect on the connection between FAW and FWB of women micro-entrepreneurs. Based on social network theory, when there are social interactions among individuals who are aware of financial terms and concepts such as savings, borrowing and investment, they tend to increase their financial well-being. From empirical literature, Bongomin et al. (2018) concluded that social networking moderates the connection amid financial literacy as well as financial inclusion of poor households living in rural areas

of Uganda. Similarly, She et al. (2023), found that excessive use of social network sites negatively influences young working adults' financial well-being.

As indicated in Table 21 social network did not significantly moderate the rest of the relationship in H2g to H2j. This implies that social network has no strengthening effect on the relationship between FKN and FBH, FBH and FWB, FSK and FWB as well as FAT and FWB. However, there is no moderating effect on these pairs of relationship except on FBH and FWB ( $f^2 = 0.014$ ). This situation is possible because sometimes, not every social interaction is beneficial in improving financial well-being. In contrast, social network theory explains that when people interact with one another, the effect of financial literacy on their financial well-being is enhanced. Though a study on moderating role of social network in the connection amid FKN, FBH, FAT and FSK and FWB has not been sighted, similar work by She et al. (2021) confirms that negative use of social network does not improve financial well-being. However, in a similar study conducted by Mahendru, Sharma and Hawkins (2022), the authors found that social network positively enhances financial well-being of consumers.

### **Moderating Role of Patriarchal Culture (PATC) in the Relationship between FL and Economic Empowerment**

The third objective is to examine the moderating role of patriarchal culture in the relationship between financial literacy and economic empowerment of women micro-entrepreneurs. Financial well-being and control and decision-making power are the variables in economic empowerment. The first part involved the moderating role of patriarchal



culture in the relationship between financial literacy as well as control and decision-making power. The second part also dealt with the moderating role of patriarchal culture on the nexus between financial literacy and financial well-being.

### Measurement Model

The measurement model for moderating the role of patriarchal culture in the association amid financial literacy as well as control and decision-making power was analysed below:

**Table 32: Internal Consistency Reliability of the Moderating Role of PATC in the Relationship amid FL and CDMP**

	Cronbach's alpha	rho_A	Composite reliability
Control and decision-making power	0.867	0.909	0.908
Financial attitude	0.743	0.767	0.729
Financial awareness	0.771	0.787	0.853
Financial behaviour	0.731	0.777	0.840
Financial knowledge	0.750	0.934	0.809
Financial skills	0.764	0.864	0.804
Patriarchal culture	0.770	0.787	0.845

Source: Field Survey (2023)

### Internal Consistency Reliability

Table 32 displays the results of the reliability for the constructs above. Based on the information in the table, all constructs exhibit Cronbach's Alpha values above 0.7, meaning all constructs demonstrate good internal consistency. In addition to Cronbach's Alpha, rho\_A is used as a measure of internal consistency. All rho\_A values for the constructs in the study are above the recommended threshold of 0.7, further validating the good reliability of these constructs. The composite reliability provides a better understanding of reliability than Cronbach's Alpha; Composite reliability values should be at least 0.7 to be considered satisfactory (Hair et al., 2017). Again, all constructs

in the study met this criterion, signalling excellent reliability. The measures used for all constructs in this study are, therefore, reliable.

**Table 33: Convergent Validity of the Moderating Role of PATC in the Relationship amid FL and CDMP**

Constructs	Average Variance Extracted (AVE)
Control and decision-making power	0.712
Financial attitude	0.683
Financial awareness	0.592
Financial behaviour	0.638
Financial knowledge	0.591
Financial skills	0.577
Patriarchal culture	0.578

Source: Field Survey (2023)

### **Convergent Validity**

Table 33 provides the results of the convergent validity test for the study's constructs. As a rule of thumb, an AVE of 0.5 or above is deemed satisfactory as it suggests that, on average, the construct explains more than half of the variance of its indicators. The AVE values in the table exceed the 0.5 threshold. The AVE values presented in Table 33 confirm that the constructs used in the study possess good convergent validity.

**Table 34: HTMT of the Moderating Role of PATC in the Relationship between FL and CDMP**

	CDMP	FAT	FAW	FBH	FKN	FSK	PATC	PATC x FKN	PATC x FBH	PATC x FAW	PATC x FSK	PATC x FAT
CDMP												
FAT	0.180											
FAW	0.294	0.233										
FBH	0.340	0.277	0.316									
FKN	0.051	0.137	0.464	0.064								
FSK	0.159	0.108	0.075	0.142	0.065							
PATC	0.373	0.175	0.237	0.454	0.063	0.177						
PATC x FKN	0.036	0.060	0.090	0.062	0.055	0.095	0.304					
PATC x FBH	0.247	0.124	0.251	0.598	0.032	0.124	0.507	0.172				
PATC x FAW	0.340	0.133	0.220	0.373	0.074	0.048	0.321	0.105	0.564			
PATC x FSK	0.117	0.091	0.057	0.171	0.075	0.133	0.212	0.100	0.302	0.096		
PATC x FAT	0.075	0.194	0.119	0.202	0.031	0.087	0.066	0.032	0.268	0.289	0.116	

Source: Field Survey (2023)

### **Discriminant Validity**

Table 34 presents the results of the discriminant validity test using the Heterotrait-Monotrait ratio (HTMT). The HTMT ratio is a more recent approach to assess discriminant validity. According to Henseler et al. (2015), modern studies recommend HTMT as the best measure because Fornell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity.

The threshold for the HTMT value is less than 0.90 (or, more conservatively, less than 0.85), meaning that the constructs share less than 90% (or 85%) of their variance (Henseler et al., 2015). As seen in the Table, all the HTMT values are below the 0.90 or even the more stringent 0.85 thresholds. This suggests that all the constructs and the interaction terms in the study are distinct from each other, confirming good discriminant validity. The HTMT ratios, therefore, substantiate that the constructs used in the study demonstrate good discriminant validity.

### **Structural Model**

The structural model for moderating the role of patriarchal culture on the relationship between financial literacy and control and decision-making power was analysed below:

**Table 35: Inner VIF of the Moderating Role of PATC in the Relationship between FL and CDMP**

Constructs	VIF
Financial attitude	1.079
Financial awareness	1.222
Financial behaviour	1.522
Financial knowledge	1.122
Financial skills	1.031
Patriarchal culture	1.395
Patriarchal culture x Financial knowledge	1.169
Patriarchal culture x Financial behaviour	2.197
Patriarchal culture x Financial awareness	1.665
Patriarchal culture x Financial skills	1.137
Patriarchal culture x Financial attitude	1.170

Source: Field Survey (2023)

### **Multicollinearity Assessment**

Table 35 demonstrates the Variance Inflation Factor (VIF) for each construct. The commonly accepted threshold for VIF is typically 3 and VIF value above this threshold is usually taken as a signal of problematic multicollinearity (Hair et al., 2021). The highest VIF value is for the interaction term between patriarchal culture and financial behaviour at 2.197, which is still significantly lower than the conservative threshold of 3. This suggests that there is no significant multicollinearity in the model.

### **Hypotheses of Moderating Role PATC in the Relationship amid FL and CDMP**

The following hypotheses were put forward for the evaluation of the moderating role of patriarchal culture in the relationship amid financial literacy as well as control and decision-making power.

*H3a: Patriarchal culture negatively moderates the relationship amid financial knowledge and control and decision-making power*

*H3b: Patriarchal culture negatively moderates the relationship amid financial behaviour and control and decision-making power*

*H3c: Patriarchal culture negatively moderates the relationship amid financial awareness and control and decision-making power*

*H3d: Patriarchal culture negatively moderates the relationship amid financial skills and control and decision-making power*

*H3e: Patriarchal culture negatively moderates the relationship amid financial attitude and control and decision-making power*

**Table 36: Significance of Moderating Effect of Patriarchal Culture in the Link between FL and CDMP**

Hypothesis	Beta	Standard deviation	T statistics	P values
H3a -PATC-> CDMP	-0.241	0.060	3.995	0.000
H3b -PATC x FKN-> CDMP	-0.087	0.074	1.179	0.238
H3c -PATC x FBH -> CDMP	-0.081	0.066	1.236	0.216
H3d -PATC x FAW -> CDMP	-0.203	0.143	1.420	0.215
H3d -PATC x FSK -> CDMP	-0.054	0.066	0.816	0.415
H3e -PATC x FAT -> CDMP	-0.019	0.059	0.319	0.750

Source: Field Survey (2023)

The effect of the moderator on the exogenous variable is important as it controls for the direct effect of the moderator on the exogenous construct (Hair et al., 2017.). Therefore, the effect of patriarchal culture on control and decision-making power is analysed before the moderating analysis and discussion. As indicated in Table 36, patriarchal culture is a significant predictor of participants' control and decision-making power (Beta = -0.241;  $p=0.001$ ). This means that patriarchal culture negatively influenced the control and decision-making power of women micro-entrepreneurs. This implies that an increase in patriarchal culture resulted in a decrease in the control and decision-making power of women micro-entrepreneurs. The result is per the study of Lecoutere and Wuyts (2021) in which the researchers found that

patriarchy negatively affects the decision-making of agricultural women. Similarly, the study of Ferdoos and Zahra (2016) supported the finding that patriarchy negatively affects women's decision-making power.

***H3a: Patriarchal culture negatively moderates the relationship between financial knowledge as well as control and decision-making power.***

In Table 36, hypothesis 3a portrays that patriarchal culture did not significantly moderate the connection between financial knowledge and control and decision-making power of Women micro-entrepreneurs (WMEs) (Beta = -0.087;  $p = 0.238$ ). Therefore, the hypothesis is not supported. This implies that changes in the patriarchal culture of WMEs do not have a significant influence on the association amid financial knowledge and control and decision-making power.

***H3b: Patriarchal culture moderates the relationship amid financial behaviour and control and decision-making power***

Hypothesis H3b deals with how patriarchal culture moderates the nexus between financial behaviour and control and decision-making power. It clearly shows that patriarchal culture is not a significant moderating variable in the association amid financial behaviour and control and decision-making power of women micro-entrepreneurs (Beta = -0.081;  $p = 0.216$ ). Thus, the hypothesis is not supported. This means that a change in the patriarchal culture of WMEs did not significantly change the relationship amid their financial behaviour and control and decision-making power.

***H3c: Patriarchal culture negatively moderates the relationship amid financial awareness and control and decision-making power***

Table 36 depicts that patriarchal culture is not a significant moderating variable in the association amid financial awareness as well as control and the decision-making power of women micro-entrepreneurs (Beta = -0.203;  $p = 0.215$ ). The hypothesis is not supported. The implication is that patriarchal culture is less relevant in the relationship amid financial awareness and control and decision-making power.

***H3d: Patriarchal culture negatively moderates the relationship amid financial skills and control and decision-making power***

As indicated in Table 36, patriarchal culture does not significantly moderate the relationship amid financial skills as well as control and the decision-making power of women micro-entrepreneurs (Beta = -0.054;  $p = 0.415$ ). This result does not support the hypothesis. It implies that patriarchal culture is less relevant in the relationship amid financial skills as well as control and decision-making power.

***H3e: Patriarchal culture negatively moderates the relationship amid financial attitude and control and decision-making power***

The path result indicates that patriarchal culture as a moderating variable does not have a significant effect on the association amid financial attitude as well as control and decision-making power of women micro-entrepreneurs (Beta = -0.019;  $p = 0.750$ ). This renders the hypothesis unsupported. Thus, the presence of a patriarchal culture is not relevant in reducing women micro entrepreneurs' decision-making power.



**Table 37: Effect Size of PATC on the Link between FL and CDMP**

	CDMP
PATC x FKN	0.006
PATC x FBH	0.013
PATC x FAW	0.042
PATC x FSK	0.004
PATC x FAT	0.000

Source: Field Survey (2023)

**Effect Size ( $f^2$ )**

Indication from Table 37 indicates that the effect size ( $f^2$ ) of patriarchal culture in the relationship amid financial knowledge as well as control and decision-making power is 0.006, which, by Cohen's recommendation, means that there is no effect size because it is lower than 0.02. This implies that the patriarchal culture's contribution to the effect of financial knowledge on control and decision-making power is negligible. Thus, patriarchal culture has no moderating effect on the control and decision-making power of women micro-entrepreneurs in Accra Metropolis. In the same way, except for financial awareness and control and decision-making power nexus, patriarchal culture does not affect the rest of the relationships.

**Table 38: Co-efficient of Determination and Predictive Relevance of the Moderating Role of PATC in the Relationship between FL and CDMP**

	R-square	R-square adjusted	$Q^2$
Control and decision-making power	0.244	0.222	0.143

Source: Field Survey (2023)

**Co-efficient of Determination and Predictive Relevance**

Table 38 and Figure 6 display that financial awareness, financial attitude, financial behaviour, financial knowledge and financial skills as predictor variables, together with patriarchal culture as moderating variables, jointly account for 24.4% variations in control and decision-making power of the respondents. Also, the predictive relevance of financial literacy, patriarchal

culture and control and decision-making power model is greater than zero ( $Q^2 = 0.143$ ). This means that with patriarchal culture as a moderator, the model has 14.3% predictive power.

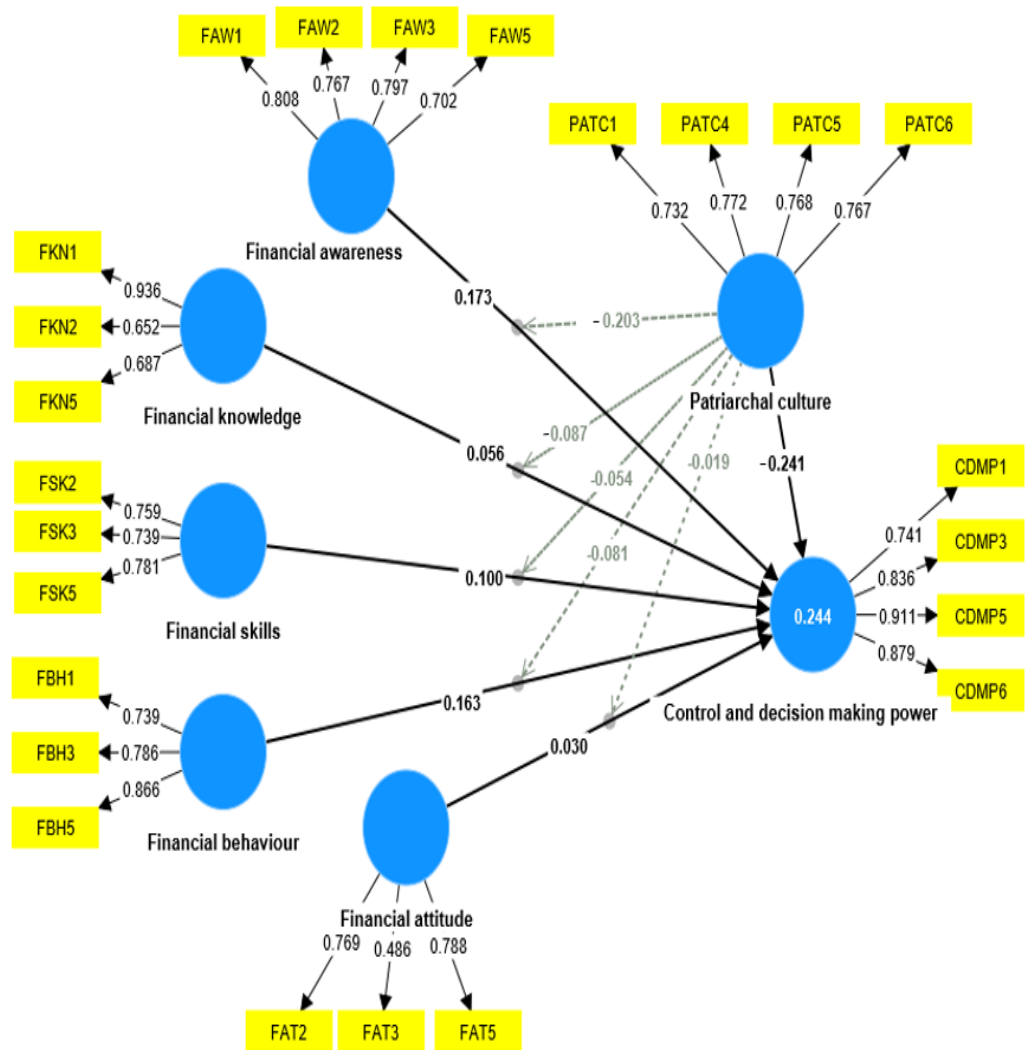


Figure 6: Patriarchal Culture as a Moderator between FL and CDMF  
Source: Field survey, (2023).

### Moderating Role of PATC in the Relationship amid FL and FWB

The second part of objective three is to examine the moderating role of patriarchal culture on the relationship between financial literacy and the financial well-being of women micro-entrepreneurs.

### Measurement Model

The following analysis deals with the measurement model for moderating the role of patriarchal culture in the association amid financial literacy as well as financial well-being.

**Table 39: Internal Consistency Reliability of the Moderating Role of PATC in the Relationship between FL and FWB**

	Cronbach's alpha	rho_A	Composite reliability
Financial attitude	0.743	0.887	0.728
Financial awareness	0.771	0.795	0.852
Financial behaviour	0.731	0.772	0.840
Financial knowledge	0.813	0.814	0.914
Financial skills	0.764	0.765	0.801
Financial well-being	0.882	0.913	0.913
Patriarchal culture	0.770	0.779	0.847

Source: Field Survey (2023)

### Internal Consistency Reliability

Table 39 presents the results for the reliability of each construct in examining the moderating role of patriarchal culture in financial literacy and financial well-being relationships. The values of Cronbach's Alpha range between 0 and 1, with higher values representing better reliability. As a guideline, values of Cronbach's Alpha should be at least 0.7 to be considered acceptable. All values in this study surpass this threshold, indicating good internal consistency among the items measuring each construct. As recommended by Dijkstra and Henseler (2015), rho\_A values should be at least 0.7. All constructs in the study met this criterion.

Composite Reliability (CR) provides an estimate of the overall reliability of a collection of heterogeneous but similar items. The recommended CR value is 0.7 or above, as proposed by Hair et al. (2017). All the constructs meet this criterion, which indicates excellent reliability.

**Table 40: Average Variance Extracted of the Moderating Role of PATC in the Relationship amid FL and FWB**

Constructs	Average Variance Extracted (AVE)
Financial attitude	0.549
Financial awareness	0.591
Financial behaviour	0.637
Financial knowledge	0.842
Financial skills	0.574
Financial well-being	0.679
Patriarchal culture	0.581

Source: Field Survey (2023)

### **Convergent Validity**

The Average Variance Extracted (AVE) for each construct involved in the study is indicated in Table 40. According to Fornell and Larcker (1981), the AVE for any given construct should be 0.5 or more, which indicates that, on average, the construct explains more than half of the variance of its indicators. The AVE values for all constructs in the study are close to or exceed the 0.5 threshold, suggesting good convergent validity. The results, therefore, indicate that all the constructs in the study have an acceptable level of convergent validity. This provides confidence that the indicators used for each construct are indeed a good representation of that construct.

**Table 41: HTMT of the Moderating Role of PATC in the Relationship between FL and FWB**

	FAT	FAW	FBH	FKN	FSK	FWB	PATC	PATC x FAW	PATC x FKN	PATC x FBH	PATC x FSK	PATC xFAT
FAT												
FAW	0.233											
FBH	0.277	0.316										
FKN	0.107	0.475	0.045									
FSK	0.108	0.075	0.142	0.052								
FWB	0.199	0.293	0.381	0.052	0.166							
PATC	0.175	0.237	0.454	0.040	0.177	0.380						
PATC x FAW	0.066	0.096	0.037	0.010	0.079	0.063	0.127					
PATC x FKN	0.123	0.249	0.596	0.019	0.127	0.259	0.505	0.097				
PATC x FBH	0.135	0.220	0.369	0.068	0.049	0.352	0.323	0.197	0.564			
PATC x FSK	0.092	0.056	0.170	0.066	0.130	0.125	0.222	0.048	0.298	0.092		
PATC x FAT	0.190	0.117	0.205	0.026	0.089	0.082	0.070	0.029	0.273	0.284	0.128	

Source: Field Survey (2023)

### Discriminant Validity

Table 41 presents the discriminant validity of the moderating role of patriarchal culture in the relationship amid financial literacy and financial well-being. HTMT is a measure of discriminant validity, which assesses the extent to which a construct is truly distinct from other constructs. According to Henseler et al. (2015), modern studies recommend HTMT as the best measure because Fornell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity.

Henseler et al. (2015) suggest that the HTMT value should be significantly less than 1, with a more conservative threshold being 0.85. As shown in the Table, it can be seen that all the HTMT values are less than 0.85, indicating that all constructs in the model are distinct from each other. For example, the HTMT value for financial behaviour and patriarchal culture is 0.454, suggesting a clear distinction between these two constructs. The results in Table 41 therefore suggest that there is good discriminant validity among all constructs used in the study.

### Structural Model

**Table 42: Inner VIF of the Moderating Role of PATC in the Relationship between FL and FWB**

	Financial well-being
Financial attitude	1.071
Financial awareness	1.331
Financial behaviour	1.517
Financial knowledge	1.206
Financial skills	1.033
Patriarchal culture	1.338
Patriarchal culture x Financial knowledge	1.141
Patriarchal culture x Financial behaviour	2.210
Patriarchal culture x Financial awareness	1.745
Patriarchal culture x Financial skills	1.139
Patriarchal culture x Financial attitude	1.167

Source: Field Survey (2023)

### **Multicollinearity Assessment**

Table 42 provides the Variance Inflation Factor (VIF) of the moderating role of patriarchal culture in financial literacy and financial well-being relationships. VIF is a measure used to detect multicollinearity, which is the presence of high correlations among predictor variables in a regression model. A high VIF value for a predictor variable suggests that it is highly correlated with the other predictor variables in the model, making it challenging to identify the unique contribution of each predictor to the dependent variable. Hair, et al. (2021) suggested that a VIF value greater than or equal to 3 indicates a collinearity problem. In Table 42, all VIF values for the constructs are less than 3, and most are even below 2, suggesting the absence of severe multicollinearity in the model.

### **Hypotheses on the Moderating Role of PATC in the Relationship between FL and FWB**

The following hypotheses were put forward for the evaluation of the moderating role of patriarchal culture in the relationship between financial literacy and financial well-being.

*H3f: Patriarchal culture negatively moderates the relationship amid financial knowledge and financial well-being.*

*H3g: Patriarchal culture negatively moderates the relationship amid financial behaviour and financial well-being.*

*H3h: Patriarchal culture negatively moderates the relationship amid financial awareness and financial well-being*

*H3i: Patriarchal culture negatively moderates the relationship amid financial skills and financial well-being*

*H3j: Patriarchal culture negatively moderates the relationship amid financial attitude and financial well-being*

**Table 43: Significance of Moderating Effect of PATC on the Link between FL and FWB**

Hypothesis	Beta	Standard deviation	T statistics	P values
PATC -> FWB	-0.212	0.058	3.651	0.000
H3f = PATC x FKN -> FWB	-0.038	0.061	0.627	0.531
H3g = PATC x FBH -> FWB	-0.091	0.060	1.510	0.131
H3h = PATC x FAW -> FWB	-0.211	0.183	1.153	0.110
H3i = PATC x FSK -> FWB	-0.055	0.065	0.849	0.396
H3j = PATC x FAT -> FWB	-0.014	0.057	0.243	0.808

Source: Field Survey (2023)

Table 43 portrays that patriarchal culture is a significant predictor of participants' financial well-being (Beta = -0.212;  $p = 0.001$ ). There is a negative relationship between patriarchal culture and the financial well-being of women micro-entrepreneurs. This implies that an increase in patriarchal culture resulted in a decrease in the financial well-being of women micro-entrepreneurs. The result compares well with the study of Bhuiyan and Ivlevs (2019) in which the researchers found that patriarchal norms negatively affect women's micro-entrepreneurships. The study of Ummiroh et al. (2022) supported the finding by concluding that patriarchy negatively affects women entrepreneurs' financial well-being.

*H3f: Patriarchal culture negatively moderates the relationship amid financial knowledge and financial well-being*

The first hypothesis in Table 43 shows the moderating role of Patriarchal culture in the relationship between financial knowledge and financial well-being. The hypothesis is not supported because there is a statistically insignificant negative moderating effect of patriarchal culture on the relationship between financial knowledge and financial well-being (Beta =



-0.038;  $p = 0.531$ ). This means that the presence of patriarchal culture is less relevant in how financial knowledge affects the financial well-being of women micro-entrepreneurs. The finding disputes the patriarchal theory that explains that women's subordination impedes their involvement in economic activities and consequently affects their financial well-being.

***H3g: Patriarchal culture negatively moderates the relationship amid financial behaviour and financial well-being***

Table 43 depicts that patriarchal culture has a statistically insignificant negative moderating effect on the relationship between financial behaviour and financial well-being of women micro-entrepreneurs of Accra Metropolis (Beta = -0.091;  $p = 0.131$ ). The hypothesis is therefore not supported. The implication is that patriarchal culture does not increase or decrease the effect that financial knowledge has on the financial well-being of women micro-entrepreneurs.

***H3h: Patriarchal culture negatively moderates the relationship amid financial awareness and financial well-being***

The third hypothesis in Table 43 is on the moderating role of Patriarchal culture in the relationship between financial awareness and financial well-being. It is noted from the table that the moderating role of patriarchal culture on the relationship between financial knowledge and financial well-being of women micro-entrepreneurs is statistically insignificant (Beta= -0.211;  $p = 0.110$ ). This means that patriarchal culture is less relevant in how financial awareness influences the financial well-being of women micro-entrepreneurs. The finding disputes the patriarchal theory that

explains that women's subordination impedes their involvement in economic activities and consequently affects their financial well-being.

***H3i: Patriarchal culture negatively moderates the relationship amid financial skills and financial well-being***

The fourth hypothesis in Table 43 portrays the moderating role of Patriarchal culture in the relationship between financial skills and financial well-being. It indicates that there is a statistically insignificant negative moderating effect of patriarchal culture in the connection amid financial skills and financial well-being of women micro-entrepreneurs of Accra Metropolis (Beta= -0.038;  $p = 0.531$ ). Therefore, the hypothesis is not supported. This means that the presence of patriarchal culture does not increase or decrease the effect that financial skills have on the financial well-being of women micro-entrepreneurs.

***H3j: Patriarchal culture negatively moderates the relationship amid financial attitude and financial well-being***

The moderating role of Patriarchal culture in the relationship between financial attitude and financial well-being is indicated as the last hypothesis in Table 43. Statistically, patriarchal culture does not moderate the connection amid financial attitude and financial well-being (Beta= -0.014;  $p=0.808$ ). The hypothesis is not supported. This means that patriarchal culture is less relevant in influencing the effect of financial attitude on the financial well-being of women micro-entrepreneurs. By implication, patriarchal culture cannot be considered as a variable influencing the connection amid financial attitude and financial well-being.

**Table 44: Effect size of PATC on the Link between FL and FWB**

	FWB
PATC x FKN	0.002
PATC x FBH	0.016
PATC x FAW	0.044
PATC x FSK	0.004
PATC x FAT	0.000

Source: Field Survey (2023)

**Effect size ( $f^2$ )**

Table 44 indicates that the moderating role of patriarchal culture on the relationship between financial awareness and financial well-being is small ( $f^2 = 0.044$ ). This effect size is large meaning that PATC is a major factor in strengthening the relationship between FAW and FWB. Also, PATC has a medium effect ( $f^2 = 0.016$ ) on the connection between FBH and FWB. The moderating role of patriarchal culture in the rest of the relationships has no effect as their effect sizes are less than 0.005. This means that patriarchal culture's contribution to the effect of financial literacy variables on financial well-being is negligible. Thus, patriarchal culture has no moderating effect on the financial well-being of women micro-entrepreneurs in Accra Metropolis.

**Table 45: Co-efficient of Determination and Predictive Relevance of the Moderating Role of PATC on the Relationship amid FL as well as FWB**

	R-square	R-square adjusted	$Q^2$
Financial well-being	0.264	0.243	0.171

Source: Field Survey (2023)

**Co-efficient of Determination and Predictive Relevance**

Table 45 and Figure 7 display that financial awareness, financial attitude, financial behaviour, financial knowledge, and financial skills as predictor variables and patriarchal culture as moderating variables jointly account for 26.4% variations in the financial well-being of the respondents.

Also, the predictive relevance of financial literacy, patriarchal culture and financial well-being model is greater than zero ( $Q^2 = 0.143$ ).

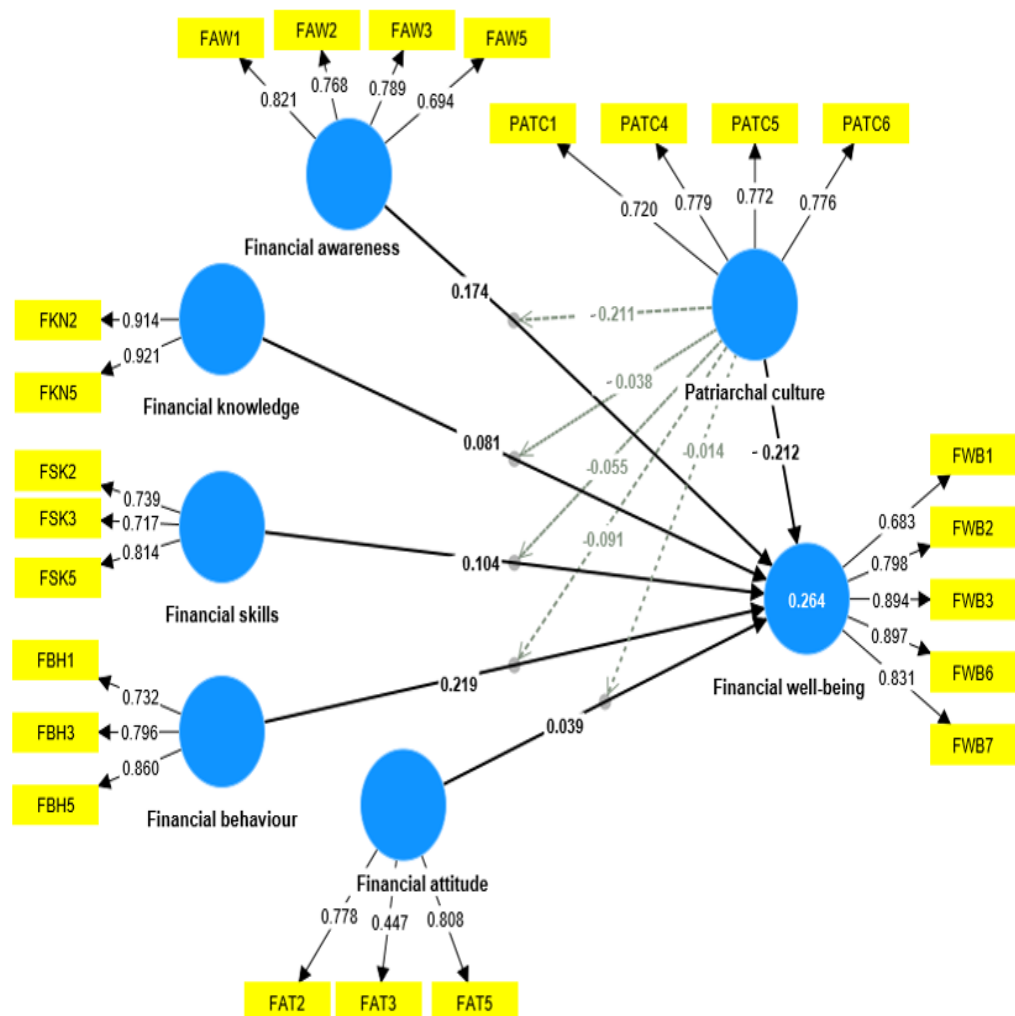


Figure 7: Patriarchal Culture as a moderator amid FL and FWB  
Source: Field survey, (2023).

### Discussion of findings

Hypotheses H3a to H3e and H3f to H3j as depicted in Table 36 and Table 43 respectively deal with the moderating role of patriarchal culture in the connection between financial literacy and economic empowerment. PATC has no significant moderating effect on the connection amid FKN as well as CDMP (Beta = -0.087;  $p = 0.238$ ), FBH and CDMP (Beta = -0.081;  $p = 0.216$ ), FAW and CDMP (Beta = -0.203;  $p = 0.215$ ), FSK and CDMP (Beta = -

0.054;  $p = 0.415$ ) as well as FAT and CDMP (Beta = -0.019;  $p = 0.750$ ). Therefore, these hypotheses are not supported, Though, in all the relationships, the moderating effects are negative as expected, they are not significant. This means that patriarchal culture is supposed to weaken the relationship amid financial literacy constructs as well as economic empowerment constructs but it is not so, because it is insignificant as a moderating variable. This might be due the nature of patriarchal practices in the Accra metropolis which is not so pervasive or strong. In this case patriarchy may not have significant negative effect on the economic empowerment of women micro-entrepreneurs.

The finding is in contrast with the patriarchal theory, which demonstrates that patriarchal culture is relevant in the connection amid financial literacy as well as economic decision-making of women. There is hardly an empirical study that deals with the moderating effect of patriarchal culture on the connection amid financial literacy and control and the decision-making power of women entrepreneurs. Even though the hypotheses of objective three is not supported, some studies have been conducted on patriarchal practices. For instance, in a study conducted by Ummiroh et al. (2022), they found out that patriarchy negatively impacted Nepalese women entrepreneurs' decision-making. Corroborating the finding of Ummiroh et al. (2022) is a study by Selamat and Endut (2020), who found that patriarchy is a hindrance to Malaysian Muslim women entrepreneurs' control and decision-making. Again, the findings of Lecoutere and Wuyts (2021) revealed that patriarchy played a major role in negatively impacting women's decision-making in Ugandan agriculture households.

## Chapter Summary

Chapter five involves objectives one, two and three. Objective one examined the effect of financial literacy on the economic empowerment of women micro-entrepreneurs. The second objective assessed the moderating role of social networks in the connection amid financial literacy and economic empowerment, and the third objective assessed the moderating role of patriarchal culture in the relationship between financial literacy and economic empowerment. Both measurement and structural models were analysed, and the findings were discussed. The constructs met reliability and validity requirements. All the financial literacy proxies, except for financial attitude, influenced financial well-being. Also, except for financial attitude and financial skills, all the financial literacy proxies influenced control and decision-making power.

Again, social networks significantly moderated only the relationship between financial awareness and economic empowerment proxies (control and decision-making power and financial well-being). However, social network did not significantly moderate the relationship between financial literacy and economic empowerment. The next chapter considers financial inclusion, patriarchal culture, social networks and economic empowerment.

## CHAPTER SIX

### FINANCIAL INCLUSION, PATRIARCHAL CULTURE, SOCIAL NETWORK AND ECONOMIC EMPOWERMENT

#### Introduction

Objectives four, five and six are analysed and discussed in this chapter. Objective four deals with the effect of financial inclusion on economic empowerment. Objective five also captures the moderating effect of patriarchal culture on the relationship between financial inclusion and economic empowerment. The sixth objective considers the moderating effect of social networks on the connection amid financial inclusion and economic empowerment. The measurement model and structural model of each objective are analysed and discussed. Specifically, indicator reliability, internal consistency reliability, convergent validity and discriminant validity are considered for the measurement model. Collinearity, path coefficient, effect size ( $f^2$ ), predictive relevance ( $Q^2$ ) and explained variance ( $R^2$ ) are also considered for the structural model.

#### Influence of Financial Inclusion (FL) on Economic Empowerment

In examining the influence of financial inclusion on economic empowerment, the measurement model is presented first before the structural model.

#### Measurement Model

The indicators used for the constructs were based on a reflective measurement model, hence the reflective measurement specifications used for outer model analysis. Indicator reliability was measured using outer loadings. Internal consistency reliability was measured with Cronbach alpha, rho\_A and composite reliability, whereas Average Variance Extracted (AVE) was used to

measure the convergent validity. Discriminant validity was assessed by Heterotrait-Monotrait (HTMT).

**Table 46: Internal Consistency Reliability of the Relationship between Financial Inclusion (FI) and Economic Empowerment**

Constructs	Cronbach's alpha	rho_A	Composite reliability
Access	0.835	0.758	0.801
Control and decision-making power	0.877	0.944	0.917
Financial well-being	0.882	0.922	0.912
Quality	0.731	0.772	0.839
Usage	0.771	0.773	0.854

Source: Field Survey (2023)

### Internal Consistency Reliability

The internal consistency reliability provides information for the analysis and evaluation of the outer model. From the results (Table 46), Cronbach alpha, rho\_A, and composite reliability satisfied the internal consistency threshold. Hair et al. (2019) posited that Cronbach alpha exceeding 0.7 is considered acceptable for internal consistency. Table 46 shows that Cronbach alpha for all the constructs is greater than 0.7, with the highest being financial well-being (0.882) and the lowest being quality (0.731). All the indicators for rho\_A have values greater than 0.7, which also means that the indicators measure the constructs reliably. The scores for composite reliability are greater than 0.7, supporting the reliability of the constructs. Internal consistency reliability of financial inclusion and economic empowerment constructs are established because the values of Cronbach alpha, rho\_A and composite reliability exceed the minimum threshold of 0.7.



**Table 47: Indicator Reliability (Outer Loadings) of the Relationship between FI and Economic Empowerment**

Indicators	Loadings	T stat	P values
ACC1 <- Access	0.731	4.515	0.000
ACC2 <- Access	0.715	4.296	0.000
ACC3 <- Access	0.821	4.955	0.000
CDMP1 <- Control and decision-making power	0.595	7.389	0.000
CDMP3 <- Control and decision-making power	0.937	55.825	0.000
CDMP5 <- Control and decision-making power	0.908	56.083	0.000
CDMP6 <- Control and decision-making power	0.953	66.117	0.000
FWB1 <- Financial well-being	0.663	11.695	0.000
FWB2 <- Financial well-being	0.793	16.847	0.000
FWB3 <- Financial well-being	0.895	41.245	0.000
FWB6 <- Financial well-being	0.899	63.591	0.000
FWB7 <- Financial well-being	0.841	32.649	0.000
QUAL1 <- Quality	0.729	10.757	0.000
QUAL4 <- Quality	0.797	15.819	0.000
QUAL6 <- Quality	0.861	22.467	0.000
USA1 <- Usage	0.781	24.944	0.000
USA2 <- Usage	0.792	25.370	0.000
USA3 <- Usage	0.787	26.280	0.000
USA4 <- Usage	0.720	17.281	0.000

Source: Field Survey (2023)

**Indicator Reliability**

The indicator reliability was analysed using the outer loadings for the respective variables of financial inclusion and economic empowerment constructs. According to Hair et al. (2019) factor loadings of 0.7 or above are considered acceptable. Similarly, Hair et al., (2017) indicated that a factor loading of 0.4 is considered minimum for indicator reliability. However, do Valle & Assaker (2016) argued that, so long as an outer loading of less than 0.7 will not affect composite reliability and average variance extracted, it should be accepted.

As indicated in Table 47, except for control and decision-making power (CDMP 1) with a factor loading of (0.595) and financial well-being (FWB 1) with a factor loading of (0.663), all the outer loadings are greater

than 0.7. CDMP 6 has the highest factor loading of 0.953, whilst CDMP1 has the lowest loading of 0.595. This means that the indicators used for measuring financial inclusion and economic empowerment met the reliability criteria.

**Table 48: Average Variance Extracted (AVE) of the Relationship between FI and Economic Empowerment**

Constructs	AVE
Access	0.573
Control and decision-making power	0.741
Financial well-being	0.677
Quality	0.636
Usage	0.594

Source: Field Survey (2023)

### Convergent Validity

The next after analyzing reliability is convergent validity, which measures how closely access, usage and quality dimensions are related in measuring financial inclusion and also how control and decision-making power, as well as financial well-being, relate to measuring economic empowerment.

As shown in Table 48, all the AVE values were greater than 0.5, suggesting adequate convergent validity (dos Santos & Cirillo, 2023). This means that they are fit for structural model analysis.

**Table 49: HTMT of the Relationship between FI and Economic Empowerment**

Constructs	ACC	CDMP	FWB	QUAL	USA
ACC					
CDMP	0.047				
FWB	0.166	0.061			
QUAL	0.142	0.061	0.381		
USA	0.075	0.487	0.293	0.316	

Source: Field Survey (2023)

### Discriminant Validity

Cross-loadings, Fornell-Larcker criterion and HTMT ratio, are all measures for analyzing and evaluating discriminant validity. According to Henseler et al., (2015), modern studies recommend HTMT as the best measure because Fornell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity. Table 49 represents HTMT in a correlation matrix form, indicating the discriminant validity of financial inclusion and economic empowerment constructs. The HTMT estimates the correlation between financial literacy and economic empowerment constructs, as suggested by (Henseler et al., 2015).

To avoid discriminant issues, the value should be greater than 0.90, whereas a value of 0.85 is considered a conservative threshold. All the correlation coefficients, as indicated in Table 49, are less than 0.85, indicating that no discriminant problems in the model. This suggests that the constructs are different from each other and can therefore be accepted for the measurement model.

### Structural Model

**Table 50: Multicollinearity Assessment (Inner VIF) of FI and Economic Empowerment Relationship**

	Control and decision-making power	Financial well-being
Access	1.001	1.001
Quality	1.070	1.070
Usage	1.070	1.070

Source: Field Survey (2023)

### **Multicollinearity**

According to Hair and Alamer (2022), structural model evaluation should begin with collinearity issues in the model. To them, highly correlated independent variables cannot individually explain the dependent variables and, for that reason, should be merged to form one variable. Hair, et al., (2021) suggested that a VIF value greater than or equal to 3 indicates a collinearity problem. From Table 50, it is evident that there were no multicollinearity problems as the inner VIFs are less than the maximum threshold of 3. This means that access, usage and quality, which are the variables of the financial inclusion construct, do not correlate highly to influence economic empowerment constructs.

### **Path Coefficient Assessment**

There were six hypotheses for objective four, which sought to examine the influence of financial inclusion on the economic empowerment of women micro-entrepreneurs. These hypotheses are:

#### **H4: Financial inclusion influences women economic empowerment**

*H4a: Access positively influences control and decision-making power*

*H4b: Usage positively influences control and decision-making power*

*H4c: Quality positively influences control and decision-making power*

*H4d: Access positively influences financial well-being*

*H4e: Usage positively influences financial well-being*

*H4f: Quality positively influences financial well-being*

**Table 51: Path Coefficient of the Relationship between Financial Inclusion and Economic Empowerment**

Hypotheses/Paths	B	Std dev	f <sup>2</sup>	T stat	P values
H4a: ACC -> CDMP	0.001	0.055	0.000	0.012	0.991
H4b: USA -> CDMP	0.458	0.074	0.244	6.195	0.000
H4c: QUAL -> CDMP	0.155	0.052	0.028	3.007	0.003
H4d: ACC-> FWB	0.121	0.055	0.018	2.214	0.027
H4e: USA -> FWB	0.169	0.063	0.032	2.672	0.008
H4f: QUAL-> FWB	0.312	0.055	0.109	5.626	0.000

Source: Field Survey (2023)

***H4a: Access positively influences control and decision-making power***

Hypothesis 4a sought to test whether access to financial inclusion influences the control and decision-making power of Women Micro-entrepreneurs (WMEs). Table 51 depicts that access is not a significant predictor of control and decision-making power of WMEs in the Accra Metropolis (Beta = 0.001;  $p = 0.991$ ) with no effect size ( $f^2 = 0.000$ ). The hypothesis is not supported. This means that the accessibility of financial institutions to WMEs does not influence their control and decision-making power. The reason is that having financial institutions closer and accessible to WMEs does not translate into using the products and services of these institutions, which involves decision-making. Thus, when it comes to the influence of financial inclusion on control and decision-making power, access is not a predictor variable.

***H4b: Usage positively influences control and decision-making power***

The next hypothesis in Table 51 depicts the influence of usage on the control and decision-making power of WMEs. It is evident that usage significantly and positively influences the control and decision-making power of WME's financial well-being (Beta = 0.458;  $p = 0.001$ ) with a moderate effect size ( $f^2 = 0.244$ ). The hypothesis is therefore supported. This means that

the control and decision-making power of WMEs is improved when they use financial services and products.

***H4c: Quality positively influences control and decision-making power***

The next hypothesis examined the influence of the quality dimension of financial inclusion on control and decision-making power. It was revealed from Table 51 and Figure 8 that the quality of financial products significantly and positively influences the control and decision-making power of WMEs (Beta = 0.155;  $p = 0.003$ ) with a small effect size ( $f^2 = 0.028$ ). The hypothesis is supported. The implication is that quality financial products and services of formal financial institutions may result in effective decision-making of WMEs regarding investment, savings and borrowing.

***H4d: Access positively influences financial well-being***

The next hypothesis is about the influence of access on financial well-being. Table 51 indicates that access significantly and positively influences financial well-being (Beta = 0.121;  $p = 0.027$ ) with a small effect size ( $f^2 = 0.018$ ). The hypothesis is supported. The implication is that WME's accessibility to formal financial institutions has a significant but small effect on their financial well-being. When formal financial institutions are closer and more accessible to WMEs there is a tendency for some of them to patronize the financial products and services of these institutions (borrowing, savings and insurance) thereby enhancing their financial well-being.

***H4e: Usage positively influences financial well-being***

Also, the fourth hypothesis deals with the influence of usage on the financial well-being of WMEs. As indicated in Table 51, usage is a significant predictor of financial well-being (Beta = 0.169;  $p = 0.008$ ) with a small effect

size ( $f^2 = 0.032$ ). What this mean is that a unit increase in the usage of financial products and service (savings, borrowing, insurance) will result in a 16.9 percent increase in the financial well-being of women micro-entrepreneurs.

***H4f: Quality positively influences financial well-being***

The last hypothesis in the financial inclusion and economic empowerment nexus concerns the influence of quality on the financial well-being of WMEs. As indicated in Table 51 and Figure 8, quality significantly and positively influences the financial well-being of WMEs (Beta = 0.312;  $p = 0.001$ ) with a moderate effect size ( $f^2 = 0.109$ ). The hypothesis is therefore supported, meaning that a unit increase in the quality of financial service will result in a 31.2% increase in the financial well-being of WMEs and vice versa. When women micro-entrepreneurs perceive customer service support provided by financial services providers to be of quality, they tend to increase their savings, borrow and invest more to improve their financial well-being.

**Table 52: Co-efficient of Determination and Predictive Relevance of Financial Inclusion and Economic Empowerment**

Constructs	R-square	R-square adjusted	$Q^2$
Control and decision-making power	0.197	0.191	0.177
Financial well-being	0.171	0.164	0.138

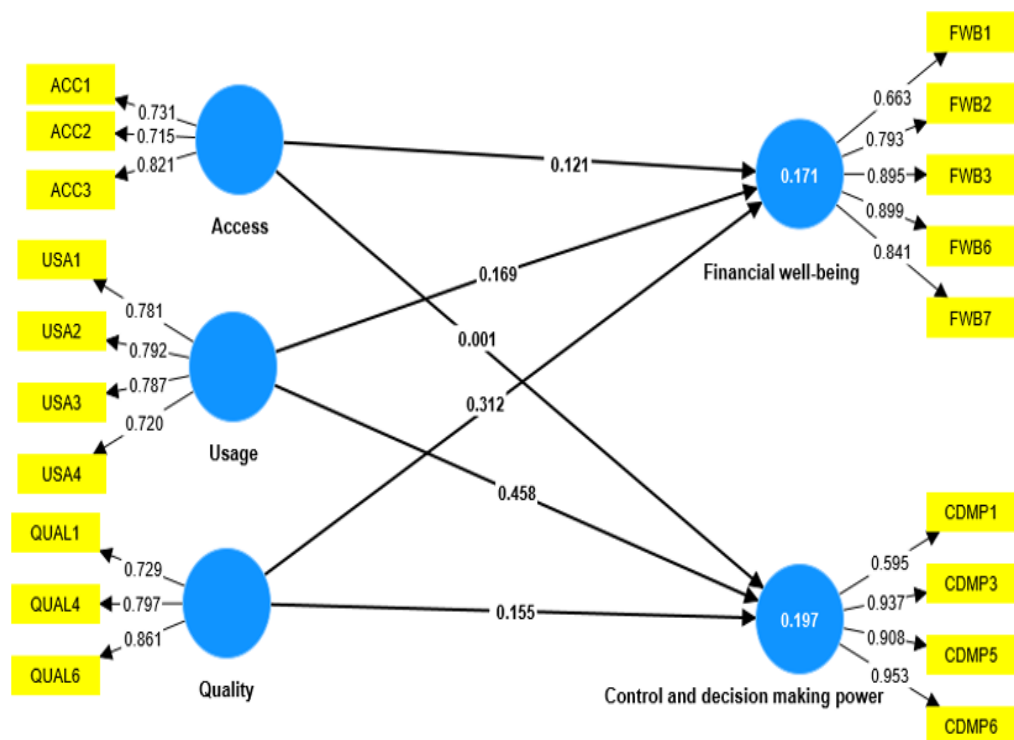
Source: Field Survey (2023)

**Coefficient of Determination and Predictive Relevance**

Table 52 and figure 8 indicate that the coefficient of determination for control and decision-making power is 0.197, and that of financial well-being is 0.171. These figures denote the extent to which variations in the dependent variables (financial well-being and control and decision-making power) are

explained by the independent variables (access, usage and quality). Accordingly, 19.7 percent of variations in control and decision-making power are attributed to financial inclusion (access, usage and quality). In the same way, a 17.1 percent change in financial well-being is attributable to financial inclusion.

The  $Q^2$  value deals with the predictive power of the model. Thus, it indicates the extent to which the independent variables predict the dependent variables. From Table 52, it is evident that the models have high predictive power as the scores are greater than zero (0.177) for control and decision-making power and 0.177 for financial well-being. This means that access, usage, and quality can accurately predict financial well-being and control and decision-making power of women micro-entrepreneurs in the Accra Metropolis.



*Figure 8: Structural Model for financial inclusion and economic empowerment*  
Source: Field Survey (2023)



## Discussion of findings

Examining the effect of financial inclusion on economic empowerment of women micro-entrepreneurs is the objective four of the study. As indicated in hypothesis H4a to H4f in Table 51 the relationship between ACC and CDMP was positive but the p-value was not significant (Beta = 0.001;  $p = 0.991$ ). This implies that access to financial institutions by WMEs does not influence their control and decision-making power. The effect size ( $f^2 = 0.000$ ) confirms the finding that ACC has no effect on CDMP. The reason is that having financial institutions closer and accessible to WMEs does not mean that the products and services of these institutions would be patronised. Thus, the result of the study is at variance with expectation. According to Zeqiraj et al. (2022), access to financial institutions is not the same as usage of the financial services and product, thus supporting the finding that access is not significant in empowering women micro-entrepreneurs if they cannot access microcredit from such institutions.

However, when formal financial institutions are closer and more accessible to WMEs there is the tendency for some of them to patronize the financial products and services of these institutions (borrowing, savings and insurance) thereby enhancing their financial well-being. As noted by Chikwira et al. (2022), access to financial institutions has positive influence on financial well-being of small business owners. Similarly, Mengstie (2022) found that access to financial institutions impacts positively on the economic empowerment of microfinance clients. Also, their findings are in agreement with the investigation by Nandru et al. (2021) who found that accessibility of

financial institutions positively impacts the financial well-being of marginalized street vendors in India.

From Table 51, the path coefficients and the p-values of the relationship between USA and CDMP (Beta= 0.458;  $p = 0.000$ ), QUAL and CDMP (Beta= 0.155;  $p = 0.003$ ), ACC and FWB (Beta = 0.121;  $p = 0.027$ ), USA and FWB (Beta = 0.169;  $p = 0.008$ ) as well as QUAL and FWB (Beta = 0.312;  $p = 0.000$ ) are positive and significant. The effect size between USA and CDMP, USA and FWB, as well as QUAL and FWB are ( $f^2 = 0.244$ ), ( $f^2 = 0.032$ ), ( $f^2 = 0.109$ ) respectively. The implication is that usage and quality have small to large effect on CDMP as well as FWB.

Financial inclusion provides women micro-entrepreneurs with decision-making power and financial well-being and is in line with empowerment theory and Kabeer three-dimensional theory that suggest that resources support economic empowerment. In support of the findings, Al-Shami et al. (2018) concluded that usage of microcredit enhances the income of women micro businesses, which in turn helps them to participate in household decision-making, particularly concerning control of income and expenditure. Similarly, a study by Selvia et al. (2021) indicated that borrowing, savings and insurance positively impact the financial well-being of persons aged above 18 years in Sumatra, India.

Again, the findings compared well with the study by Nandru et al. (2021), in which the researchers stated that financial products and services contribute significantly to the financial well-being of street vendors in India. All these findings point to the fact that when people use financial products and services, their living conditions can improve, leading to sound financial well-

being. However, studies by Sinha et al. (2023) argued that greater usage of microcredit by women negatively impacts on their decision-making on borrowing. Thus, when greater borrowing opportunities are available to women, they tend not to make better decisions on which credit to access.

Again, quality financial products and services of formal financial institutions may result in effective decision-making of WMEs regarding investment, savings and borrowing and financial well-being. For instance, when WMEs receive customer support in dealing with former financial institutions, they make better financial decisions involving savings and investment options that improves their financial-wellbeing. This is supported by Losada-Otálora and Alkire (2019), who indicated that banks can improve the financial well-being of their customers by offering high-quality financial services and being transparent to them. This compares well with the study by Mende et al. (2020), in which they concluded that fruitful engagement between banks and their customers leads to the financial well-being of the latter. Contributing to this finding, Hoang et al. (2022) found that the quality of services provided by banks improves their financial well-being.

### **Moderating Role of PATC in the Relationship amid FL and Economic Empowerment**

To examine the moderating role of patriarchal culture in the relationship between financial inclusion and economic empowerment is the fifth objective of the study. The economic empowerment construct has two variables: control and decision-making power and financial well-being. Therefore, the first evaluation dealt with the moderating role of patriarchal culture in the relationship between financial inclusion and control and the

decision-making power of women micro-entrepreneur. The second examination was on moderating the role of patriarchal culture in the relationship between financial inclusion and the financial well-being of women micro-entrepreneurs.

### **Examining the Moderating Role of PATC in the Relationship amid FI and CDMF**

#### **Measurement Model Assessment**

The measurement model was based on reflective indicators. In assessing the measurement model, internal consistency reliability was measured using Cronbach alpha, rho\_A and composite reliability. Outer loading was used for indicator reliability. Convergent validity was measured using AVE, whilst the HTMT ratio was used for discriminant validity.

**Table 53: Internal Consistency Reliability of the Moderating Role of PATC in the Relationship amid FI and CDMF**

Construct	Cronbach's alpha	rho_A	Composite reliability
Access	0.635	0.647	0.803
Control and decision-making power	0.841	0.891	0.890
Patriarchal culture	0.804	0.806	0.871
Quality	0.731	0.781	0.838
Usage	0.771	0.797	0.852

Source: Field Survey (2023)

#### **Internal Consistency Reliability**

As indicated in Table 53, Cronbach alpha, rho\_A, and composite reliability were internal consistency reliability measures used for the outer model. Hair et al., (2022), suggest that Cronbach alpha exceeding 0.7 is considered acceptable for internal consistency. Table 53 depicts that Cronbach alpha for all the constructs exceeds 0.7, meaning that they satisfy the

minimum threshold. All the measures for rho\_A have values greater than 0.7, which also means that the indicators measure the constructs reliably. Also, the composite reliability has scores greater than 0.7, suggesting that internal consistency is met. This implies that the internal consistency and reliability of access, usage, quality, patriarchal culture and control and decision-making power have been established.

**Table 54: Outer Loadings of the Moderating Role of PATC in the Relationship between FI and CDMP**

Indicators	Loadings	T stat	P values
ACC1 <- Access	0.764	3.813	0.000
ACC2 <- Access	0.706	3.163	0.002
ACC3 <- Access	0.806	3.738	0.000
CDMP1 <- Control and decision-making power	0.690	12.706	0.000
CDMP3 <- Control and decision-making power	0.834	21.660	0.000
CDMP5 <- Control and decision-making power	0.908	52.991	0.000
CDMP6 <- Control and decision-making power	0.830	30.984	0.000
PATC1 <- Patriarchal culture	0.810	16.164	0.000
PATC4 <- Patriarchal culture	0.835	18.650	0.000
PATC5 <- Patriarchal culture	0.803	19.320	0.000
PATC6 <- Patriarchal culture	0.721	12.573	0.000
QUAL1 <- Quality	0.726	10.392	0.000
QUAL4 <- Quality	0.789	14.792	0.000
QUAL6 <- Quality	0.869	23.907	0.000
USA1 <- Usage	0.827	14.317	0.000
USA2 <- Usage	0.769	14.061	0.000
USA3 <- Usage	0.773	12.431	0.000
USA4 <- Usage	0.702	9.766	0.000
Patriarchal culture x Quality -> Patriarchal culture x Quality	1.000	0.000	0.000
Patriarchal culture x Usage -> Patriarchal culture x Usage	1.000	0.000	0.000
Patriarchal culture x Access -> Patriarchal culture x Access	1.000	0.000	0.000

Source: Field Survey (2023)

### Indicator Reliability

Reliability can also be measured using factor loadings of the various indicators of the variables. Table 54 indicates that there is indicator reliability for all the independent variables, the dependent variable and the moderator variable. Factor loadings should be 0.7 or above (Hair et al., 2019). However, Hair et al. (2017) indicated that a factor loading of 0.4 is considered minimum for indicator reliability. All the factor loadings except for CDMF (0.690) are above 0.70, meaning that the indicators are reliable and can be used for the study.

**Table 55: Average Variance Extracted of the Moderating Role of PATC in the Relationship between FI and CDMF**

Construct	AVE
Access	0.577
Control and decision-making power	0.671
Patriarchal culture	0.630
Quality	0.635
Usage	0.591

Source: Field Survey (2023)

### Convergent Validity

Convergent validity measures how a variable correlate positively with other variables to measure the same construct. As presented in Table 55, the convergent validity of the indicators was measured utilizing AVE. All the AVE values were greater than 0.5, suggesting adequate convergent validity (dos Santos & Cirillo, 2023). This means that they are fit for structural model analysis.

**Table 56: HTMT of the Moderating Role of PATC in the Relationship between FI and CDMP**

Construct	ACC	CDMP	PATC	QUAL	USA	PATC X QUAL	PATC X USA	PATC X ACC
ACC								
CDMP	0.144							
PATC	0.135	0.300						
QUAL	0.142	0.367	0.377					
USA	0.075	0.289	0.200	0.316				
PATC x QUAL	0.127	0.227	0.492	0.468	0.202			
PATC x USA	0.050	0.323	0.324	0.301	0.177	0.585		
PATC x ACC	0.033	0.062	0.170	0.176	0.060	0.288	0.117	

Source: Field Survey (2023)

### **Discriminant Validity**

Discriminant validity can be measured using the Fornell-Larcker criterion, HTMT and cross-loadings. Since HTMT is a superior measure of validity as it overcomes the weaknesses of cross-loadings and the Fornell-Larcker criterion (Henseler et al., 2019), the study considered it for discriminant validity assessment. According to Henseler et al. (2015), modern studies recommend HTMT as the best measure because Fornell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity.

Discriminant validity measures how different or unique a construct is from other constructs. Discriminant issues arise when the value is greater than 0.90 whereas a value of 0.85 is considered acceptable (Henseler et al., 2019). From Table 56, all the correlation coefficients are less than 0.85, indicating that there is no discriminant issue. This renders the constructs appropriate for the measurement model.

### **Structural Model Assessment**

#### **Moderating Role of PATC in the Relationship amid FI and CDMP**

Structural model assessment should begin with collinearity analysis to ensure that predictor constructs do not measure the same thing in influencing the dependent variable Hair, Risher, Sarstedt & Ringle (2019). Therefore, the Variance Inflated Factor (VIF) was assessed before evaluating the path coefficient, effect size ( $f^2$ ), predictive relevance ( $Q^2$ ) and explained variance (R-square).



**Table 57: Inner VIF of Moderating Role of PATC in the Relationship between FI and CDMP**

	Control and decision-making power
Access	1.011
Patriarchal culture	1.284
Quality	1.310
Usage	1.085
Patriarchal culture x Quality	1.992
Patriarchal culture x Usage	1.539
Patriarchal culture x Access	1.101

Source: Field Survey (2023)

### Multicollinearity Assessment

Variance Inflated Factor (VIF) was assessed to ensure that access, usage, quality and patriarchal culture do not correlate highly to explain control and decision-making power. Hair et al. (2021) posited that a VIF value greater than or equal to 3 indicates a collinearity problem. Table 57 depicts that the inner VIF was less than the maximum threshold of 3, ranging from 1.011 to 1.992. Therefore, there were no multicollinearity problems with access, usage, quality and patriarchal culture

### Hypotheses of Moderating Role of PATC in the Relationship between FI and CDMP

The following hypotheses were analysed and discussed.

*H5a: Patriarchal culture negatively moderates access and control and decision-making power.*

*H5b: Patriarchal culture negatively moderates usage and control and decision-making power.*

*H5c: Patriarchal culture negatively moderates quality and control and decision-making power.*

**Table 58: Significance of Moderating Effect of PC on the Link between FI and CDMP**

Hypotheses/path	Beta	Std dev	T stat	P values
PATC-> CDMP	-0.096	0.046	2.087	0.003
H5a: PATC x ACC -> CDMP	-0.002	0.065	0.037	0.970
H5b: PATC x USA -> CDMP	-0.210	0.081	2.579	0.010
H5c: PATC x QUAL -> CDMP	-0.076	0.061	1.237	0.216

Source: Field Survey (2023)

***H5a: patriarchal culture negatively moderates the relationship amid access and control and decision-making power***

It is portrayed in Table 58 and Figure 9 that patriarchal culture has an insignificant negative moderating effect on the nexus between access and control and the decision-making power of WMEs (Beta= -0.002; p= 0.970). Thus, the hypothesis (H5a) is not supported. This means that women's subordination by men does not vary the relationship between WME's access to financial institutions and control and decision-making power. Being subordinated by their male counterparts does not in any way influence the nexus between the availability of financial institutions and their choice of saving, borrowing and investment decision-making.

***H5b: patriarchal culture negatively moderates the relationship amid usage and control and decision-making power***

Hypothesis H5b also addressed the moderating role of patriarchal culture in the relationship between usage and control and decision-making power. It is established in Table 58 and Figure 9 that patriarchal culture negatively and significantly moderates the influence of usage on control and decision-making power (Beta = -0.210; p = 0.010). The hypothesis is supported. This means that variations in patriarchal culture affect how

financial services usage influences control and decision-making power. Even though WMEs may want to use financial services and products, men's superiority becomes an obstacle for them to make sound decisions

***H5c: patriarchal culture negatively moderates the relationship amid quality and control and decision-making power***

Table 58 and Figure 9 indicate that patriarchal culture has an insignificant negative moderating effect on the relationship amid quality and control and decision-making power (Beta= -0.076; p= 0.216). Thus, the hypothesis (H5c) is not supported. Therefore, patriarchal culture cannot be considered as a moderating factor in the nexus between quality and control and decision-making power. The implication is that patriarchy does not vary the relationship amid the quality of financial services as well as the control and decision-making power of WMEs. In other words, how the quality of financial services influences the decision-making of women micro-entrepreneurs cannot be varied by patriarchy.

**Table 59: Effect Size of PATC on the Link between FI and CDMP**

	CDMP
PATC x QUAL	0.013
PATC x USA	0.047
PATC x ACC	0.000

Source: Field Survey (2023)

**Effect Size ( $f^2$ )**

Using Kenny and Judd's (2019) recommendation of 0.005, 0.01 and 0.025 as small, medium and large effect sizes, respectively, it can be concluded from Table 59 that patriarchal culture has a small effect ( $f^2 = 0.013$ ) on the relationship amid quality and control and decision-making power. Also,

patriarchal culture has a large effect on the relationship amid usage and control and decision-making power ( $f^2 = 0.047$ ). Finally, patriarchal culture does not affect the relationship amid access and control and decision-making power ( $f^2 = 0.000$ ).

**Table 60: Co-efficient of Determination and Predictive Relevance of the Moderating Role of PATC in the Relationship between FI and CDMP**

	R-square	R-square adjusted	$Q^2$
Control and decision-making power	0.215	0.201	0.139

Source: Field Survey (2023)

#### **Co-efficient of Determination and Predictive Relevance**

As depicted in Table 60 and Figure 9, access, usage, quality, and the moderating variable (patriarchal culture) jointly account for 21.5% of variations in control and decision-making power of the respondents. Also, based on the same Table, the predictive relevance of financial inclusion, control and decision-making power, and patriarchal culture model is greater than zero ( $Q^2 = 0.139$ ). This implies that the model has 13.9% predictive power.

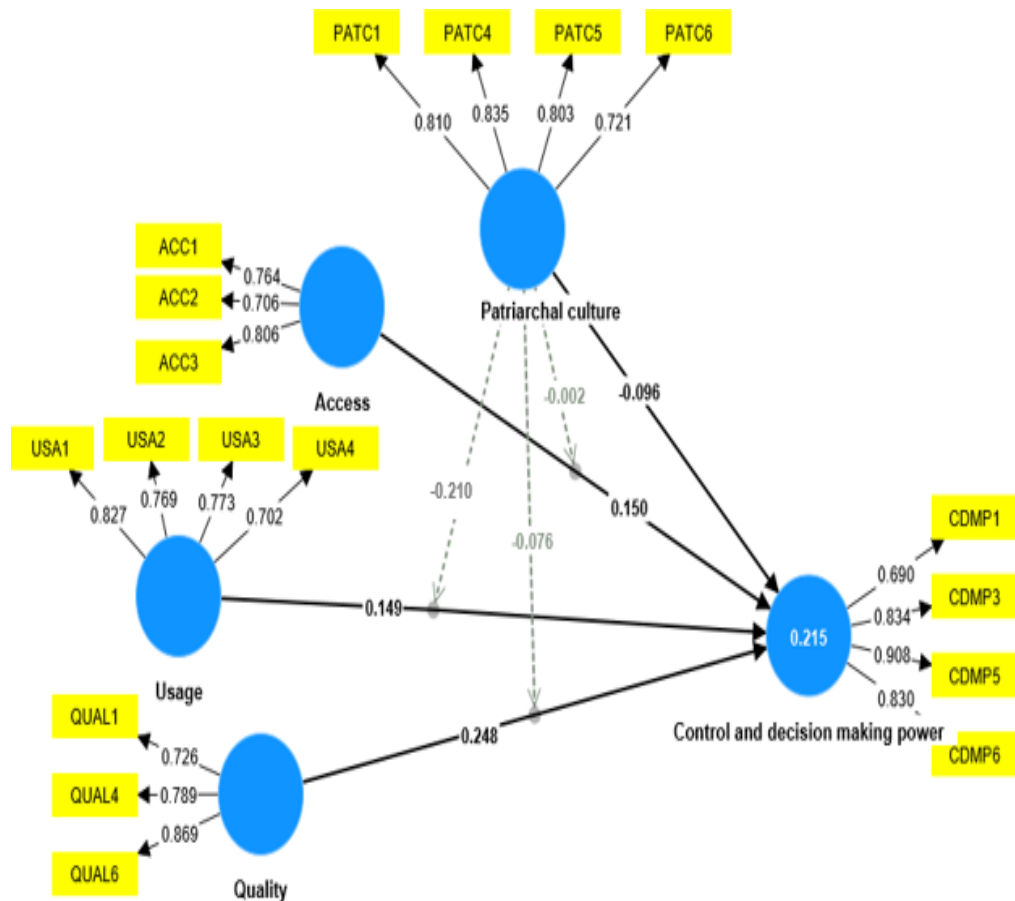


Figure 9: Patriarchal Culture as a moderator between FI and CDMP  
Source: Field Survey (2023).

### Examining the Moderating Role of PATC in the Relationship amid FI and FWB

#### Measurement Model Assessment

The measurement model deals with internal consistency reliability, convergent validity and discriminant validity: The following were used in the measurement model: Cronbach alpha, rho A and composite reliability, Outer loading, AVE and HTMT.

**Table 61: Internal Consistency Reliability of the Moderating Role of PATC in the Relationship between FI and FWB**

Constructs	Cronbach's alpha	rho_A	Composite reliability
Access	0.735	0.754	0.801
Financial well-being	0.882	0.920	0.912
Patriarchal culture	0.804	0.805	0.872
Quality	0.731	0.772	0.840
Usage	0.771	0.795	0.852

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Source: Field Survey (2023)

### Internal Consistency Reliability

Table 61 depicts the results of Cronbach alpha, rho\_A, and composite reliability of the internal consistency reliability model. Hair et al. (2022), posited that Cronbach alpha exceeding 0.7 is considered acceptable for internal consistency. As indicated in Table 61, Cronbach alpha for all the constructs exceeds 0.7. Therefore, all the constructs satisfy the minimum threshold. Also, the measures for rho\_A have values greater than 0.7, meaning that the indicators measure the constructs reliably. Again, the composite reliability has scores exceeding the minimum threshold of 0.7, suggesting that internal consistency is met. Finally, the internal consistency reliability of access, usage, quality, patriarchal culture and financial well-being has been established as there are no issues with Cronbach alpha, rho\_A and composite reliability.

**Table 62: Outer Loadings of the Moderating Role of PATC in the Relationship between FI and FWB**

Indicators	Loadings	T stat	P values
ACC1 <- Access	0.738	4.575	0.000
ACC2 <- Access	0.715	3.952	0.000
ACC3 <- Access	0.817	4.835	0.000
FWB1 <- Financial well-being	0.669	12.380	0.000
FWB2 <- Financial well-being	0.794	17.743	0.000
FWB3 <- Financial well-being	0.895	44.715	0.000
FWB6 <- Financial well-being	0.899	70.869	0.000
FWB7 <- Financial well-being	0.837	33.657	0.000
PATC1 <- Patriarchal culture	0.814	18.100	0.000
PATC4 <- Patriarchal culture	0.830	18.842	0.000
PATC5 <- Patriarchal culture	0.813	21.114	0.000
PATC6 <- Patriarchal culture	0.714	12.356	0.000
QUAL1 <- Quality	0.732	10.742	0.000
QUAL4 <- Quality	0.797	15.681	0.000
QUAL6 <- Quality	0.860	22.198	0.000
USA1 <- Usage	0.821	19.014	0.000
USA2 <- Usage	0.768	14.863	0.000
USA3 <- Usage	0.788	15.535	0.000
USA4 <- Usage	0.693	10.518	0.000
Patriarchal culture x Quality -> Patriarchal culture x Quality	1.000	0.000	0.000
Patriarchal culture x Access -> Patriarchal culture x Access	1.000	0.000	0.000
Patriarchal culture x Usage -> Patriarchal culture x Usage	1.000	0.000	0.000

Source: Field Survey (2023)

**Indicator Reliability**

The outer loadings in Table 62 were also used to analyse reliability for all the indicators of access, usage quality, financial well-being and patriarchal culture. For indicator reliability, Hair et al. (2019) stated that the value should be at least 0.7 whereas Hair et al. (2021) indicated that outer loadings of 0.4 are considered minimum for indicator reliability.

Indication from Table 62 is that FWB 1 has the minimum value (0.669), and FWB6 has the highest value. Apart from FWB1 (0.669) and

USA4 (0.693) the rest have values exceeding 0.7. Consequently, all the indicators have met the minimum value for indicator reliability.

**Table 63: Average Variance Extracted of the Moderating Role of PATC in the Relationship between FI and FWB**

Constructs	AVE
Access	0.574
Financial well-being	0.678
Patriarchal culture	0.630
Quality	0.637
Usage	0.591

Source: Field Survey (2023)

### **Convergent Validity**

In analyzing the outer model, convergent validity is a requirement. Convergent validity of the indicators was measured using Average Variance Extracted (AVE). From Table 63, it can be seen that all the AVE values are greater than 0.5, meaning that there is adequate convergent validity. According to dos Santos and Cirillo (2023), AVE should be greater than 0.5 to suggest that convergent validity is adequate. The entire measurement model, including AVE should meet the acceptable criteria before a researcher can proceed to structural model evaluation.



**Table 64: HTMT of the Moderating Role of PATC in the Relationship between FI and FWB**

Constructs	ACC	FWB	PATC	QUAL	USA	PATC X QUAL	PATC X USA	PATC X ACC
ACC								
FWB	0.166							
PATC	0.135	0.315						
QUAL	0.142	0.381	0.377					
USA	0.075	0.293	0.200	0.316				
PATC x QUAL	0.129	0.217	0.487	0.471	0.201			
PATC x USA	0.051	0.319	0.323	0.302	0.178	0.584		
PATC x ACC	0.036	0.088	0.184	0.187	0.061	0.300	0.129	

Source: Field Survey (2023)

### Discriminant Validity

Fornell-Larcker criterion, Heterotrait-Monotrait (HTMT) and cross-loadings are measures used in analyzing discriminant validity. The study considered HTMT for this analysis as it is the preferred choice among the rest (Henseler et al., 2015). According to Henseler et al., (2015), modern studies recommend HTMT as the best measure because Fornell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity. Discriminant validity measures how unique a construct is from other constructs. Discriminant problems arise when the value exceeds 0.90 or 0.85 (Henseler et al., 2015). Table 64, indicates that all the correlation coefficients are below 0.85 which suggests that they are free from discriminant issues.

### Structural Model Assessment

Structural model assessment should begin with collinearity analysis to ensure that predictor constructs do not measure the same thing in influencing the dependent variable Hair et al. (2019). Therefore, the Variance Inflated Factor (VIF) was assessed before evaluating the path coefficient, effect size ( $f^2$ ), predictive relevance ( $Q^2$ ) and explained variance (R-square).

**Table 65: Inner VIF of Moderating Role of PATC in the Relationship between FI and FWB**

Constructs	Financial well-being
Access	1.012
Patriarchal culture	1.276
Quality	1.307
Usage	1.084
Patriarchal culture x Quality	1.988
Patriarchal culture x Usage	1.537
Patriarchal culture x Access	1.110

Source: Field Survey (2023)

### Multicollinearity Assessment

In evaluating structural models, the researcher should ensure that the predictor variables do not correlate highly to explain the dependent variable. To do this, there is the need to assess the Variance Inflated Factor (VIF). Hair et al. (2021), posited that a VIF value greater than or equal to 3 indicates a collinearity problem. Results from Table 65 show that the inner VIFs were less than the maximum threshold of 3, ranging from 1.012 to 1.988. This means that there were no multicollinearity problems with access, usage, quality and patriarchal culture.

### Hypotheses of the Moderating Role of PATC in the Relationship between FI and FWB

*H5d: Patriarchal culture negatively moderates the nexus amid access and financial well-being.*

*H5e: Patriarchal culture negatively moderates the relationship amid usage and financial well-being.*

*H5f: Patriarchal culture negatively moderates the relationship amid quality and financial well-being.*

**Table 66: Significance of Moderating Effect of PATC in the Link between FI and FWB**

Hypotheses/path	Beta	Std dev	T stat	P values
PATC-> FWB	-0.118	0.053	2.216	0.027
H5d: PATC x ACC -> FWB	-0.028	0.065	0.429	0.668
H5e: PATC x USA -> FWB	-0.218	0.083	2.629	0.009
H5f: PATC x QUAL -> FWB	-0.097	0.060	1.597	0.110

Source: Field Survey (2023)

***H5d: patriarchal culture negatively moderates the relationship between access and financial well-being***

Results in Table 66 indicate that patriarchal culture has a negative significant effect on the financial well-being of women micro-entrepreneurs (Beta= -0.118;  $p = 0.027$ ). However, patriarchal culture has an insignificant negative moderating effect on the relationship amid access and financial well-being of WMEs (Beta= -0.028;  $p = 0.668$ ). The hypothesis (H5d) is not supported. What this means is that men's dominance over women does not influence the relationship between WME's access to former financial institutions and their financial well-being. In other words, how close WMEs are to financial institutions and its effect on their financial well-being is not affected by patriarchal culture. This means that patriarchal culture cannot be considered as a variable influencing the relationship between access and financial well-being of WMEs in the Accra metropolis.

***H5e: patriarchal culture negatively moderates the relationship amid usage and financial well-being***

Table 66 portrays the moderating role of patriarchal culture in the relationship amid usage and financial well-being. The Table also indicates that patriarchal culture significantly and negatively moderates the effect of usage on financial well-being (Beta = -0.218;  $p = 0.009$ ). The hypothesis is therefore supported. This means that patriarchal culture is an important factor in the relationship between usage and financial well-being. However, this relationship is weakened by patriarchal culture. When WMEs borrow, they can use the money to grow their businesses, thereby enhancing their financial well-being.

***H5f: patriarchal culture negatively moderates the relationship amid quality and financial well-being***

Results from Table 66 indicate that patriarchal culture has an insignificant negative moderating effect on the relationship between quality and financial well-being (Beta= -0.097; p= 0.110). The hypothesis (H5f) is not supported. Therefore, patriarchal culture cannot be considered as a moderating variable in the relationship between quality and financial well-being of women micro-entrepreneurs. By implication, patriarchal culture does not moderate the relationship between the quality of financial services and the financial well-being of WMEs.

**Table 67: Effect Size of PATC on the Link between FI and FWB**

	FWB
PATC x QUAL	0.021
PATC x USA	0.052
PATC x ACC	0.001

Source: Field Survey (2023)

**Effect Size ( $f^2$ )**

Table 67 shows the effect size of the moderating role of patriarchal culture on the relationship between financial inclusion and financial well-being. The results portray that patriarchal culture does not affect the relationship amid access and financial well-being ( $f^2 = 0.001$ ). Also, patriarchal culture has a large effect on the relationship amid usage and financial well-being ( $f^2 = 0.052$ ). Finally, patriarchal culture has a medium effect on the relationship amid quality and financial well-being ( $f^2 = 0.021$ ).

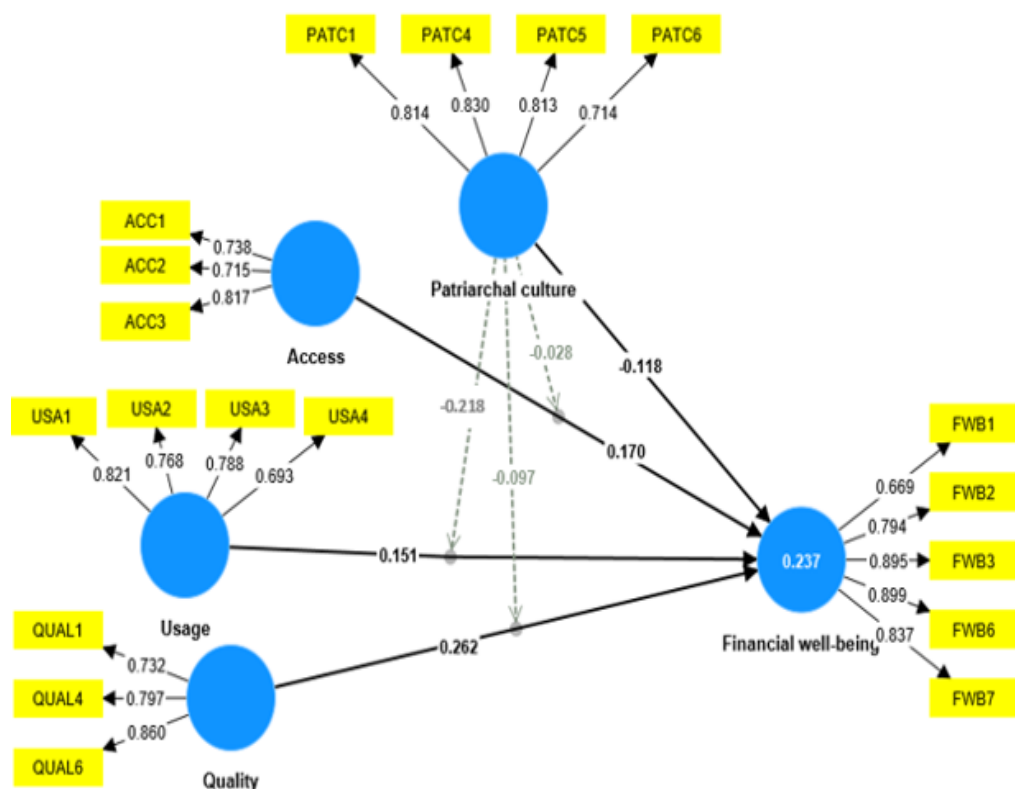
**Table 68: Co-efficient of Determination and Predictive Relevance of the Moderating role of PATC in the Relationship between FI and FWB**

Construct	R-square	R-square adjusted	Q <sup>2</sup>
Financial well-being	0.237	0.223	0.162

Source: Field Survey (2023)

**Co-efficient of Determination and Predictive Relevance**

Results from Table 68 indicate the variance explained of financial well-being by access, usage, quality and patriarchal culture. The results show that access, usage, quality and patriarchal culture jointly account for 23.7% of variations in financial well-being. Based on Chin (1998) R-square values, 0.237 is a moderate score. Also, from Table 68, the Q<sup>2</sup> is 0.162, meaning that out of the sample predictive power of financial inclusion, financial well-being and patriarchal culture model is greater than zero (Q<sup>2</sup>= 0.162). This implies that the model has 16.2% predictive power.

**Figure 10: Patriarchal Culture as a moderator amid FI and FWB**

Source: Field Survey (2023)

## Discussion of findings

The hypotheses of the moderating role of patriarchal culture in the connection amid financial inclusion and economic empowerment are indicated in Table 58 and Table 66. The effect size ( $f^2$ ) are also shown in Table 59 and Table 67. It can be observed from H5b that Patriarchal Culture (PATC) has a negative moderating effect on the connection amid usage (USA) and Control and Decision-Making Power (CDMP), consistent with expectation and the p-value was found to be significant (Beta = -0.210;  $p = 0.010$ ). The implication is that variations in patriarchal culture affect how financial services usage influences control and decision-making power. Even though WMEs may want to use financial services and products, men's superiority over women becomes an obstacle for them to contribute to decision-making. This is supported by Lecoutere and Wuyts (2021) who concluded in their study that strong patriarchal practice is a barrier to women in their household decision-making. On household investment decision-making, Guiso and Zaccaria (2023) stated that partnership rather than patriarchy fosters gender parity in investment decision-making.

Patriarchal culture is a significant moderator in the relationship between usage and control and decision-making, with large effect size ( $f^2 = 0.047$ ), meaning that when women micro-entrepreneurs are subordinated by men, their decision-making is significantly weakened. Also, PATC plays a negative significant moderating role in the connection amid USA and Financial Well-Being (Beta = -0.218;  $p = 0.009$ ) with large effect size ( $f^2 = 0.052$ ). The implication is that when women micro-entrepreneurs borrow to grow their business it expected that their financial well-being improves but the

improvement is weakened by patriarchal practices such as spending too much time on household chores and preparing children for school in a patriarchal setting. This is supported by the findings of Bhuiyan and Ivlevs (2019) wherein the Authors found that patriarchy stagnate women entrepreneurs' businesses.

On hypotheses H5a, H5c in Table 58 and H5d, H5f in Table 66, it was found that PATC has no significant moderating effect on the connection amid ACC and CDMP (Beta = -0.002;  $p=0.970$ ), QUAL and CDMP (Beta = -0.076;  $p = 0.216$ ), ACC and FWB (Beta = -0.028; 0.668) as well as QUAL and FWB (Beta = -0.097;  $p=0.110$ ). Therefore, these hypotheses are not supported, Though, in all the relationships, the moderating effects are negative as expected, they are not significant. This implies that, concerning the relationship between usage and economic empowerment, patriarchal culture is not a factor considered to weaken the relationship.

The finding is in contrast with the patriarchal theory, which demonstrates that patriarchal culture is relevant in the connection between financial inclusion and economic empowerment. In support, Adisa et al. (2019) found that patriarchy negatively impacted Nepalese women entrepreneurs' economic empowerment. In corroboration, Selamat and Endut (2020) found that patriarchy is a hindrance to Malaysian Muslim women entrepreneurs' control and decision-making.

### **Moderating Role of SN in the Relationship between FI and Economic Empowerment**

To examine the moderating role of social networks in the relationship amid financial inclusion and economic empowerment is the sixth objective of



the study. The first evaluation of this objective dealt with the moderating role of social networks in the relationship amid financial inclusion and control and the decision-making power of women micro-entrepreneurs. Secondly, the moderating role of social networks in the association amid financial inclusion and the financial well-being of women micro-entrepreneurs is considered.

### **Examining the Moderating Role of SN in the Relationship amid FI and CDMP**

#### **Measurement Model Assessment**

In assessing the measurement model, internal consistency reliability was measured utilizing Cronbach alpha, rho\_A and composite reliability. Convergent validity was measured using AVE, and HTMT ratio was used for discriminant validity.

**Table 69: Internal Consistency Reliability of Moderating Role of SN in the Relationship between FI and CDMP**

Constructs	Cronbach's alpha	rho_A	Composite reliability
Access	0.764	0.764	0.803
Control and decision-making power	0.841	0.872	0.892
Quality	0.731	0.781	0.839
Social network	0.744	0.773	0.830
Usage	0.771	0.796	0.852

Source: Field Survey (2023)

#### **Internal Consistency Reliability**

Three key measures are used to assess the reliability: Cronbach's alpha, rho\_A, and composite reliability. It is recommended that the values are not less than 0.7 (Hair et al., 2017). All the variables in Table 69 display satisfactory levels of internal consistency reliability, with all measures exceeding the recommended threshold of 0.7. This suggests that the items

used to measure these constructs are reliably capturing the underlying constructs.

**Table 70: Convergent Validity of Moderating Role of SN in the Relationship between FI and CDMP**

Constructs	Average variance extracted (AVE)
Access	0.577
Control and decision-making power	0.675
Quality	0.635
Social network	0.550
Usage	0.591

Source: Field Survey (2023)

### **Convergent Validity**

Table 70 displays the convergent validity of the constructs in the study. An AVE of 0.5 or higher indicates sufficient convergent validity because it shows that, on average, the constructs explain more than half of the variance of the indicators (Fornell & Larcker, 1981; Hair et al., 2017). The constructs of Access, Control and Decision-Making Power, Quality, Social Network, and Usage have AVE values exceeding the recommended 0.5 threshold, indicating they possess satisfactory convergent validity.

**Table 71: HTMT of the Moderating Role of SN in the Relationship between FI and CDMP**

Constructs	ACC	CDMP	QUAL	SN	USA	SN x QUAL	SN x USA	SN x ACC
ACC								
CDMP	0.144							
QUAL	0.142	0.367						
SN	0.187	0.367	0.442					
USA	0.075	0.289	0.316	0.259				
SN x QUAL	0.147	0.270	0.596	0.451	0.222			
SN x USA	0.038	0.322	0.319	0.297	0.260	0.491		
SN x ACC	0.142	0.114	0.174	0.231	0.059	0.336	0.111	

Source: Field Survey (2023)

### **Discriminant Validity**

Table 71 provides the discriminant validity of the constructs through HTMT values. According to Henseler et al., (2015), modern studies recommend HTMT as the best measure because Fonell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity.

Discriminant validity, an aspect of construct validity, ensures that a construct is distinctly different from other constructs by empirical standards. It's the degree to which a construct is truly distinct from other constructs by empirical standards (Hair et al., 2012). As a rule of thumb, HTMT values should be less than 0.90 (Henseler et al., 2015). As indicated in Table 71, all the HTMT ratios are less than 0.90, indicating sufficient discriminant validity. Therefore, it can be concluded that each construct is distinctly different and properly measured, thereby strengthening the confidence in the measurement model.

### **Structural Model**

Structural model assessment should begin with collinearity analysis to ensure that predictor constructs do not measure the same thing in influencing the dependent variable (Hair et al., 2019). Therefore, the Variance Inflated Factor (VIF) was assessed before evaluating the path coefficient, effect size ( $f^2$ ), predictive relevance ( $Q^2$ ) and explained variance (R-square).

**Table 72: Inner VIF of Moderating Role of SN in the Relationship between FI and CDMP**

	Control and decision-making power
Access	1.033
Quality	1.500
Social network	1.271
Usage	1.114
Social network x Quality	1.912
Social network x Usage	1.366
Social network x Access	1.155

Source: Field Survey (2023)

**Multicollinearity Assessment**

Table 72 displays multicollinearity. VIF provides a measure of the degree of multicollinearity in a set of multiple regression variables, enabling the identification of redundancy among the predictors within the model. A VIF above 3 implies severe multicollinearity and that the associated regression coefficient is poorly estimated (Hair et al., 2021). All the VIF values range from 1.033 to 1.912. Since all VIF values are well below the commonly used threshold of 3, there's no severe multicollinearity among the constructs, suggesting that these predictors are not redundant.

**Hypotheses of Moderating Role of SN in the Relationship amid FI and CDMP**

The following hypotheses were analysed and discussed.

*H6a: Social network positively moderates quality and control and decision-making power.*

*H6b: Social network positively moderates usage and control and decision-making power.*

*H6c: Social network positively moderates access and control and decision-making power.*

**Table 73: Significance of Moderating Effect of SN on the Link between FI and CDMP**

Hypothesis	Beta	Standard deviation	T statistics	P values
SN -> CDMP	0.185	0.055	3.366	0.001
H6a = SN x QUAL -> CDMP	0.044	0.057	0.771	0.441
H6b = SN x USA -> CDMP	0.182	0.068	2.695	0.007
H6c = SN x ACC -> CDMP	0.025	0.059	0.431	0.666

Source: Field Survey (2023)

***H6a: Social network positively moderates the relationship amid quality and control and decision-making power***

As depicted in Table 73 and Figure 11, the social network has a positive but insignificant moderating effect on the relationship amid quality and control and decision-making power (Beta= 0.044; p= 0.044). Therefore, the hypothesis (H6a) is not supported, meaning that social network cannot be considered as a moderating factor in the nexus between quality and control and the decision-making power of women micro-entrepreneurs. Social network has no effect size ( $f^2 = 0.004$ ) on the relationship amid quality and control and the decision-making power of women micro-entrepreneurs, meaning that

***H6b: social network positively moderates the relationship amid usage and control and decision-making power***

Hypothesis H6b in Table 73 also contains the moderating role of social networks in the relationship between usage and control and decision-making power. It is established that social network positively and significantly moderates the association amid usage and control and decision-making power (Beta= 0.182; p= 0.007). The hypothesis is therefore supported.

This means that, with the presence of social networks, the relationship between MWEs' usage of financial service and their control and decision-making power is enhanced. Social network has large effect size ( $f^2 = 0.035$ ) on the relationship amid usage and control and the decision-making power of women micro-entrepreneurs, meaning that the absence of social network had considerable effect on USA and CDMP nexus.

***H6c: Social network positively moderates the relationship amid access and control and decision-making power***

It is portrayed in Table 73 and Figure 11 that social network has an insignificant positive moderating impact on the relationship amid access and control and decision-making power of WMEs (Beta= 0.025;  $p = 0.666$ ). Therefore, the hypothesis (H6c) is not supported. This means that women's subordination by men does not vary the relationship between WME's access to financial institutions and control and decision-making power. Being subordinated by their male counterpart does not in any way influence the nexus between the availability of financial institutions and their investment decision-making.

**Table 74: Effect Size of SN on the Link between FI and CDMP**

	Control and decision-making power
Social network x Quality	0.004
Social network x Usage	0.035
Social network x Access	0.001

Source: Field Survey (2023)

**Effect Size ( $f^2$ )**

Kenny and Judd (2019) recommended that 0.005, 0.01 and 0.025 be considered small, medium and large effect sizes, respectively. It can be concluded from Table 74 that social network has no effect ( $f^2 = 0.004$ ) on the

relationship amid quality and control and decision-making power. The social network has a large effect on the relationship amid usage and control and decision-making power ( $f^2 = 0.035$ ). Finally, patriarchal culture does not affect the relationship amid access and control and decision-making power ( $f^2 = 0.001$ ).

**Table 75: Co-efficient of Determination and Predictive Relevance of the Moderating Role of Social Networks in the Relationship between FI and CDMP**

	R-square	R-square adjusted	$Q^2$
Control and decision-making power	0.214	0.200	0.147

#### **Co-efficient of Determination and Predictive Relevance**

Results from Table 75 indicate the coefficient of determination and predictive relevance of the moderating role of SN in the connection amid FI and CDMP. The R-square (0.214) means that access, usage, quality and SN jointly account for 21.4% of variations in control and decision-making power. Compared to Chin (1998) R-square values, the 0.214 R-square value is a moderate score. Also, from Table 75, the  $Q^2$  is 0.147, meaning that out of the sample, the predictive power of financial inclusion, social network and control and decision-making power model is greater than zero ( $Q^2 = 0.147$ ). This implies that the model has 14.7% predictive power.



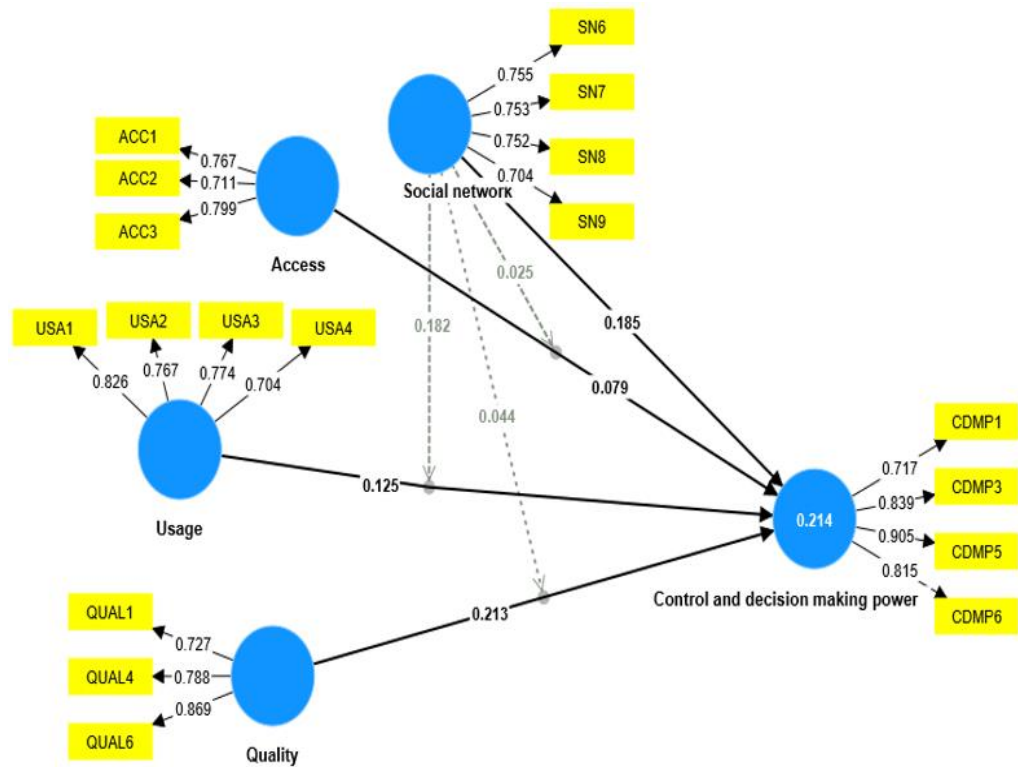


Figure 11: Social Networks as a moderator between FI and CDMF

Source: Field Survey (2023)

### Examining the Moderating Role of SN in the Relationship amid FI and FWB

#### Measurement Model Assessment

In assessing the measurement model, internal consistency reliability was measured using Cronbach alpha, rho\_A and composite reliability. Convergent validity was measured using AVE, whilst the HTMT ratio was used for discriminant validity.

**Table 76: Internal Consistency of the Moderating Role of SN in the Relationship between FI and FWB**

Constructs	Cronbach's alpha	rho_A	Composite reliability
Access	0.764	0.765	0.802
Financial well-being	0.882	0.911	0.913
Quality	0.731	0.772	0.840
Social network	0.744	0.766	0.831
Usage	0.771	0.794	0.852

Source: Field Survey (2023)

### Internal Consistency Reliability

Table 76 reports the internal consistency reliability of the constructs used in the study. The values of Cronbach's alpha for all constructs range between 0.731 and 0.882, well above the recommended threshold of 0.7. The rho\_A values range between 0.765 and 0.911, also exceeding the benchmark of 0.7, indicating good agreement among the items of each construct. The composite reliability scores also range from 0.802 to 0.913, again surpassing the acceptable threshold of 0.7 (Hair et al., 2017), thus indicating good reliability. Therefore, the scores confirm the internal consistency reliability of the measurement model.

**Table 77: Convergent Validity of the Moderating Role of SN in the Relationship between FI and FWB**

Constructs	AVE
Access	0.575
Financial well-being	0.680
Quality	0.637
Social network	0.552
Usage	0.591

Source: Field Survey (2023)

### Convergent Validity

Table 77 presents the results of the convergent validity analysis for each construct in the study. The Average Variance Extracted (AVE) is used as the indicator for this test. The AVE values for all the constructs are above the threshold of 0.5, ranging from 0.552 to 0.680, suggesting a good convergent validity). This implies that more than 50% of the variance of the observed variables is accounted for by the construct. Hence, it can be concluded that the model exhibits strong convergent validity.

**Table 78: HTMT of the Moderating Role of SN in the Relationship between FI and FWB**

	ACC	FWB	QUAL	SN	USA	SN x QUAL	SN x USA	SN x ACC
ACC								
FWB	0.166							
QUAL	0.142	0.381						
SN	0.187	0.382	0.442					
USA	0.075	0.293	0.316	0.259				
SN x QUAL	0.149	0.264	0.594	0.447	0.220			
SN x USA	0.038	0.317	0.322	0.297	0.258	0.496		
SN x ACC	0.139	0.139	0.181	0.240	0.058	0.349	0.119	

Source: Field Survey (2023)

### Discriminant Validity

Using HTMT, the results of the discriminant validity analysis in the moderating role of social networks in the relationship between financial inclusion and financial well-being are portrayed in Table 78. According to Henseler et al. (2015), modern studies recommend HTMT as the best measure because Fonell-Larcker criterion and Cross-loading criterion have unacceptable sensitivity when assessing discriminant validity. This means that they are largely unable to detect a lack of discriminant validity.

Discriminant validity is an assessment of the degree to which a construct is distinct from other constructs. To confirm discriminant validity, the Heterotrait-Monotrait (HTMT) ratio should meet the threshold of below 0.85 (Henseler et al., 2015). As depicted in Table 78, the values are less than the threshold of 0.85, ranging from 0.038 to 0.594, indicating strong discriminant validity.

### Structural Model Assessment

Moderating the role of social networks on the association amid financial inclusion and financial well-being

**Table 79: Inner VIF of the Moderating Role of SN in the Relationship between FI and FWB**

Constructs	Financial well-being
Access	1.033
Quality	1.492
Social network	1.269
Usage	1.114
Social network x Quality	1.926
Social network x Usage	1.375
Social network x Access	1.166

Source: Field Survey (2023)

### Multicollinearity Assessment

Table 79 presents the inner VIF value for each construct. A VIF above 3 implies severe multicollinearity and that the associated regression coefficient is poorly estimated (Hair et al., 2021). All the constructs possess a VIF below the threshold of 3, with values ranging from 1.033 to 1.926. This implies there is no significant multicollinearity among the constructs in the study; thus, the results of the model can be considered valid.

### Hypotheses of the Moderating Role of SN in the Relationship between FI and FWB

The following hypotheses were analysed and discussed.

*H6d: Social network moderates quality and financial well-being*

*H6e: Social network moderates usage and financial well-being.*

*H6f: Social network moderates access and financial well-being.*

**Table 80: Significance of Moderating Effect of SN on the Link amid FI and FWB**

Hypothesis	Beta	Standard deviation	T statistics	P values
SN -> FWB	0.201	0.056	3.572	0.000
H6d = SN x QUAL -> FWB	0.061	0.058	1.050	0.294
H6e = SN x USA -> FWB	0.181	0.071	2.567	0.010
H6f = SN x ACC -> FWB	0.050	0.061	0.814	0.416

Source: Field Survey (2023)

As indicated in Table 80, the social network is a significant predictor of respondents' financial well-being (Beta= 0.201; p= 0.001). This implies that changes in social network results in changes in the financial well-being of women micro-entrepreneurs. Women micro-entrepreneurs' interaction with

their weak and strong ties provides them with financial information that helps attain financial well-being. This means that an increase in social networks increased the financial well-being of women entrepreneurs.

***H6d: Social network positively moderates the relationship amid quality and financial well-being***

In Table 80 and Figure 12, hypothesis H6d depicts that social network has no significant moderating effect on the relationship between quality and financial well-being (Beta= 0.061;  $p = 0.294$ ). Therefore, the hypothesis is not supported. This means that social networks cannot be considered as a moderating factor in the connection amid quality and financial well-being of women micro-entrepreneurs.

***H6e: social network positively moderates the relationship amid usage and financial well-being***

Hypothesis H6e in Table 80 also addresses the moderating role of social networks in the relationship between usage and financial well-being. As indicated in Table 80 and Figure 12, social network positively and significantly moderates the association amid usage as well as financial well-being (Beta= 0.181;  $p = 0.010$ ). Therefore, the hypothesis is supported. This means that the presence of social networks influences the effect of usage on financial well-being. The effect size was found to be large ( $f^2 = 0.036$ ) implying that the absence of social network had considerable effect on USA and FWB nexus.

***H6f: Social network positively moderates the relationship amid access and financial well-being***

Table 80 and Figure 12 portrays that social network has no significant moderating impact on the relationship between access and financial well-being of WMEs (Beta= 0.050; p= 0.416). The hypothesis (H6f) is not supported. This means that women micro-entrepreneurs social network does not vary the relationship between their access to financial institutions and financial well-being. Participating in social network activities does not in any way influence the nexus between the availability of financial institutions and their financial well-being. One may have access to financial institutions but may not use their products and services, no matter how much information is obtained through social networks. Contrary to the study's finding, Chikwira et al. (2022), found that access to financial institutions positively influences the financial well-being of small business owners.

**Table 81: Effect Size of SN on the Link between FI and FWB**

	Financial well-being
Social network x Quality	0.008
Social network x Usage	0.036
Social network x Access	0.003

Source: Field Survey (2023)

**Effect Size ( $f^2$ )**

Moderating effects are generally low (Hari et al., 2017). Therefore, Kenny and Judd (2019) recommended that 0.005, 0.01 and 0.025 be considered as small, medium and large effect sizes respectively. It can be concluded from Table 81 that social network has no effect ( $f^2 = 0.008$ ) on the relationship between quality and financial well-being. The social network has

a large effect on the relationship amid usage and financial well-being ( $f^2 = 0.035$ ). Finally, Social network does not affect the relationship between access and financial well-being ( $f^2 = 0.003$ ).

**Table 82: Co-efficient of Determination and Predictive Relevance of the Moderating Role of Social Networks on the Relationship amid FI and FWB**

	R-square	R-square adjusted	$Q^2$
Financial well-being	0.236	0.222	0.167

#### **Co-efficient of Determination and Predictive Relevance**

Table 82 indicates the variance explained by financial well-being by access, usage, quality and social network. The results show that access, usage, quality and social network jointly account for 23.6% of variations in financial well-being. Based on Chin (1998) R-square values, 0.236 is a moderate score. Also, from Table  $Q^2$  is 0.167, meaning that out of the sample predictive power of financial inclusion, financial well-being and social network model is greater than zero ( $Q^2 = 0.167$ ). This implies that the model has 16.7% predictive power.



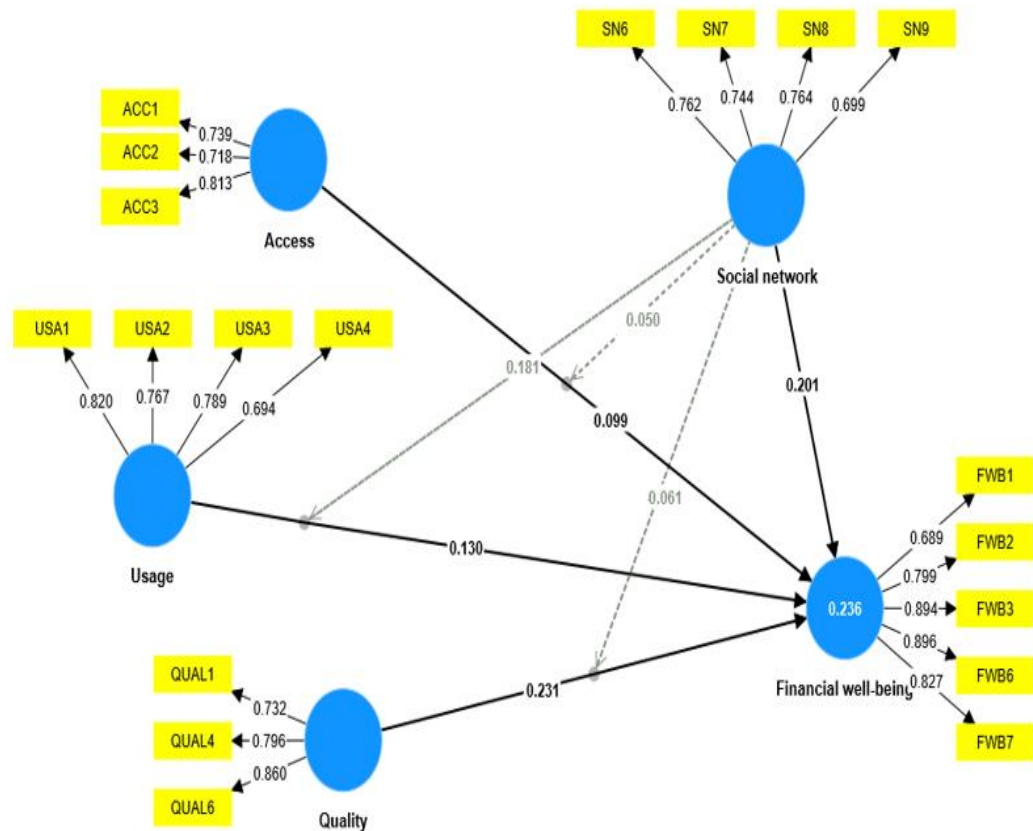


Figure 12: Social Networks in the relationship amid FI and FWB

Source: Field Survey (2023)

### Discussion of findings

Examining the moderating effect of social network on the relationship between financial inclusion and economic empowerment is the sixth and last objective. The discussion is based on the path coefficient and significance as indicated in Tables 73 and 80 as well as the effect size ( $f^2$ ) as indicated in Tables 74 and 81. As depicted in H6b, it can be observed that Social Network (SN) has a positive moderating effect on the relationship between usage (USA) and Control and Decision-Making Power (CDMP) and consistent with expectation. The p-value was found to be significant (Beta = 0.182;  $p = 0.007$ ), meaning that the presence of social network strengthens the effect that usage of financial services has on control and decision-making power.

The effect size ( $f^2 = 0.035$ ) means that the absence of SN has a large effect on USA and CDMP nexus. The implication is that when women micro-entrepreneurs engage in social network activities it enhances their ability to use financial services and products to improve their decision-making. The finding is supported by social network theory which stipulates that social interactions enhance control and decision-making power among individuals to save, borrow and invest. A pragmatic investigation by Ali et al. (2017) established that social network facilitates economic empowerment of women in Bangladesh. The finding confirms similar research undertaken by Jiménez-Zarco et al. (2021) in which the researchers concluded that social media enhances the financial performance of micro-women entrepreneurs.

Again, as observed from H6e on Table 80 social network has a positive significant moderating role in the connection amid usage and Financial Well-Being (Beta = 0.181;  $p = 0.010$ ). This means that, with the presence of social networks activities among women micro-entrepreneur, their usage of financial services improves their control and decision-making power.

The effect size as indicated on Table 81 ( $f^2 = 0.036$ ) is also large, meaning that the omission of social network has considerable effect on the relationship between USA and FWB. This means that the presence of social networks influences the effect of usage on financial well-being. The findings corroborate the study by Guo and Huang (2023) which concluded that women's membership in social groups easily enables them to use their financial resources for better financial well-being. Contributing to the findings, Nandru et al. (2021) found that financial products and services significantly influence the financial well-being of street vendors in India.

On hypotheses H6a, H6c in Table 73 and H6d, H6f in Table 80, it was found that SN has no significant moderating effect on the connection amid QUAL and CDMP (Beta = 0.044;  $p=0.441$ ), ACC and CDMP (Beta = 0.025;  $p = 0.666$ ), QUAL and FWB (Beta = 0.061; 0.294) as well as ACC and FWB (Beta = 0.050;  $p=0.416$ ). Therefore, these hypotheses were not supported and SN has no effect on these relationships. This means that SN activities among women micro-entrepreneurs cannot strengthen the extent to which QUAL and ACC influence their economic empowerment. There might be a reason for social network not enhancing the relationship between these constructs. It is not every social activity that can enhance economic empowerment of women micro-entrepreneurs.

Contrary to social network theory, economic empowerment of women micro entrepreneurs is enhanced by how they use social network interactions to have access to quality financial services and products. However, research findings by Yao and Meng (2022) indicates that social network enhances personal financial well-being. Similarly, Chikwira et al. (2022), found that access to financial institutions positively influences the financial well-being of small business owners with high social interactions.

### **Chapter Summary**

Three objectives involving objectives four, five and six were dealt with in chapter six. The fourth objective examined the effect of financial inclusion on the economic empowerment of women micro-entrepreneurs in the Accra Metropolis. The fifth objective assessed the moderating role of patriarchal culture in the relationship between financial inclusion and economic empowerment and the sixth objective assessed the moderating role of social

networks in the connection amid financial inclusion and economic empowerment. Both measurement and structural models were analysed and the findings were discussed.

All the financial inclusion proxies (access, usage and quality) influenced financial well-being. Also, except for Access, all the financial inclusion proxies (access, usage and quality) influenced control and decision-making power. Patriarchal culture was found significant in moderating the relationship between usage and control and decision-making power. It also moderated the connection amid usage and financial well-being. Again, social network was found to be significant in moderating the relationship between usage and control and decision-making power. It also moderated the relationship between usage and financial well-being. The next chapter considers the summary, conclusion and recommendation of the investigation.

## CHAPTER SEVEN

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### Introduction

The investigation aimed to look at how financial literacy and financial inclusion affect women micro-entrepreneurs' economic empowerment in Ghana. It also looked at how social networks and patriarchal culture might influence these connections. This chapter summarizes the main findings, draws conclusions, and offers recommendations based on the results and limits of the study. Suggestions for future research are also made to better comprehend the empowerment of women micro-entrepreneurs in Ghana. Lastly, the chapter points out the study's contributions to knowledge, policy, and practice.

The first goal of the study was to analyze how financial literacy impacts the economic empowerment of women micro-entrepreneurs. The second goal explored how social networks moderate the link amid financial literacy and the economic empowerment of these women. The third goal examined how patriarchal culture may moderate this same relationship. The fourth goal looked at how financial inclusion impacts the economic empowerment of women micro-entrepreneurs. The fifth goal explored how patriarchal culture moderates the connection amid financial inclusion and the economic empowerment of these women. The sixth goal analyzed how social networks moderate the relationship between financial inclusion and economic empowerment.

The study was based on a positivist philosophy, using a quantitative research method and explanatory research design. Ethical approval was granted by the

University of Cape Coast Institutional Review Board. A simple random sampling method was used to select 480 women micro-entrepreneurs from the three sub-Metros of Accra (Okaikoi South, Ashiedu Keteke, and Ablekuma South). Research assistants distributed 480 questionnaires, and 425 were returned, with 400 used for analysis. Data were analyzed using both descriptive and inferential statistics through a Structural Equation Model.

### **Summary of Findings**

The first specific objective was to assess the influence of financial literacy on economic empowerment. The findings revealed that financial awareness, financial knowledge, and financial behaviour were statistically significant predictors of control and decision-making power, whilst financial skills and financial attitude did not significantly influence control and decision-making power. All the financial literacy proxies (financial awareness, financial knowledge, financial behaviour, financial skills and financial attitude) together explained 91.4% of variations in control and decision-making power. Also, financial awareness, financial knowledge, financial behaviour and financial skills were found to be statistically significant predictors of financial well-being whilst financial attitude did not significantly influence financial well-being. All the financial literacy proxies explained 19.6% of the variation in financial well-being.

The second objective examined the moderating role of social networks on the connection amid financial literacy as well as economic empowerment. The social network was found to positively and significantly moderate only the relationship amid financial awareness and financial well-being. However, the social network did not significantly moderate the relationship amid

financial literacy variables (financial knowledge, financial behaviour, financial skills and financial attitude) and financial well-being. Also, social networks positively and significantly moderated the relationship amid financial awareness as well as control and decision-making power. The social network did not significantly moderate the relationship between the other proxies of financial literacy (financial knowledge, financial behaviour, financial skills, financial attitude) and control and decision-making power.

The third objective examined the moderating role of patriarchal culture in the connection amid financial literacy as well as economic empowerment. Patriarchal culture did not moderate the relationship amid financial literacy as well as control and the decision-making power of women micro-entrepreneurs. Also, Patriarchal culture did not moderate the relationship between financial literacy and the financial well-being of women micro-entrepreneurs.

Objective four examined the relationship between financial inclusion and economic empowerment. It was established that all the proxies of financial inclusion (access, usage and quality) significantly and positively influenced financial well-being. This means that financial inclusion is a strong predictor of financial well-being. All these variables together explained 17.1% of the variation in financial well-being. Again, usage and quality were found to influence control and decision-making power, whilst access did not influence control and decision-making power. Thus, irrespective of the availability and closeness of financial institution, the decision-making of women micro-entrepreneurs are not affected. Access, usage and quality together explained 19.7% of variations in control and decision-making power.

Objective five sought to assess the moderating role of patriarchal culture on the relationship between financial inclusion and economic empowerment. The findings suggested that patriarchal culture moderated the relationship between usage and financial well-being. Patriarchal culture did not play a moderating role in the connection amid access as well as financial well-being as well as quality and financial well-being. This means that it is only usage that matters in the moderating role of patriarchal culture on the relationship between financial inclusion and financial well-being. Also, it was found that patriarchal culture negatively moderated the relationship amid usage and control and decision-making power. Patriarchal culture did not play a moderating role in the relationships amid Effect access and control and decision-making power as well as quality and control and decision-making power. The implication is that it was only the relationship amid usage and control and decision-making power that was influenced by patriarchal culture.

The moderating role of social networks on the connection amid financial inclusion and economic empowerment was the sixth objective. The findings suggested that social networks moderated only the relationship amid usage and control and decision-making power and the relationship amid usage and financial well-being. Concerning the relationships amid access and financial well-being as well as quality and financial well-being, social network did not play a moderating role. Again, social network did not play a moderating role in the relationships amid access and control and decision-making power as well as quality and control and decision-making power. This means that it is only usage that is relevant in the moderating role of social



networks in the connection amid financial inclusion and economic empowerment of women micro-entrepreneurs.

## **Conclusion**

Globally, economic empowerment of women micro entrepreneurs has been a strategy by policy-makers to address poverty and gender inequality. Financial literacy and financial inclusion have been considered important resources in providing women micro-entrepreneurs the financial resources and financial knowledge to succeed in their businesses and consequently empower them with decision-making-power and financial well-being. However, previous studies have revealed that economic empowerment of women micro-entrepreneurs is generally low in many countries, including Ghana. The situation requires more research to provide solutions to enhancing economic empowerment of women micro-entrepreneurs. By examining the role financial literacy and financial inclusion play and the moderating role of social network and patriarchal culture in economic empowerment discourse, this study contributes to research on economic empowerment of women micro-entrepreneurs.

The literature review reveals a number of gaps requiring further investigation. Firstly, Studies on women economic empowerment have been limited to impoverished women, vulnerable women in slums and the rural poor women. However, majority of women micro-entrepreneurs in urban centers, including Accra Metropolis are vulnerable and require economic empowerment. Secondly, few studies looked at the direct relationship between financial inclusion and economic empowerment or between patriarchal culture and economic empowerment. However, studies on the moderating role of

patriarchal culture in the connection amid financial inclusion and economic empowerment are yet to be sighted. Thirdly, there are studies on financial literacy and economic empowerment, but the moderating role of social network or patriarchal culture in the relationship between financial literacy and economic empowerment is yet to be sighted. Consequently, the low financial literacy level among the micro women entrepreneurs as well as their inability to access funding for their businesses has impacted significantly on their economic empowerment.

Given the above background, this study sought to examine the relationship between financial literacy, financial inclusion and economic empowerment of women micro entrepreneurs in the Metropolis, as well as the moderating roles of social networks and patriarchal culture in these relationships. The purpose of the study has been achieved because the findings of the investigation reveal that, except for financial attitude, financial literacy influenced the economic empowerment of women micro-entrepreneurs. Also, women micro-entrepreneurs' engagement in social network activities strengthens their awareness in financial literacy resulting in positive effect on their economic empowerment.

Again, financial inclusion of women micro-entrepreneurs influenced their economic empowerment. The availability of financial institutions to provide quality financial products and services and the usage of these services by women micro-entrepreneurs impact positively on their financial well-being. Usage of microcredit enhances the income of women micro businesses, which in turn helps them to participate in household decision-making, particularly concerning control of income and expenditure. Availability of microcredit

facilities enables women micro-entrepreneurs to make sound financial decisions concerning the financial product with low interest rate. Thus, financial well-being and decision-making power of women micro-entrepreneurs are enhanced by financial inclusion. These findings open up the discussion on strengthening financial institutions to offer services to meet the financial needs of women micro entrepreneurs for their economic empowerment in order to meet SDGs 1 and 5 by the year 2030.

Moreover, women subordination by men had negative impact on the nexus between financial inclusion and economic empowerment of women micro-entrepreneurs. No matter the extent of usage of financial services or products, the presence of patriarchal practices affected negatively the economic empowerment of women micro-entrepreneurs. Furthermore, women micro-entrepreneurs might not be able to spend adequate time on their business because of household responsibilities ascribed to them by patriarchal practices. The effect is that the growth of their business is affected and consequently affecting their financial well-being and contribution to household income.

Furthermore, revelation from the study indicates that social network is necessary in strengthening the relationship between usage of financial services and economic empowerment of women micro-entrepreneurs. However, the finding not expected was patriarchal culture not having a significant moderating role in the connection amid financial literacy and economic empowerment. The possible reason might be that; men do not have control on how women micro entrepreneurs use their knowledge in financial terms to empower themselves because of the availability of social network avenues.

## Recommendations

Grounded on the findings and conclusions drawn from the study, the following recommendations are provided: Concerning objective one, the study recommends that the government of Ghana through the Ghana Enterprises Agency (GEA) should consider reaching out to women micro-entrepreneurs to educate them on financial literacy as it was found to influence the economic empowerment of women micro-entrepreneurs. Now that entrepreneurship has become so paramount in the country's job creation discourse, GEA should sensitize women micro-entrepreneurs on the awareness of financial literacy concepts such as budgeting, diversification, insurance, interest rate, borrowing and inflation. This can be done through their business advisory centres across the country and also through television programmes and radio shows. Again, before any financial assistance is given to women micro-entrepreneurs they should be educated on financial literacy.

Grounded on the findings in objective two, it is recommended that women micro-entrepreneurs should be encouraged to participate in social network activities since it was found in the study that it influences the relationship between financial literacy and financial well-being as well as control and decision-making power. Therefore, women micro-entrepreneurs should be encouraged to be part of associations and self-help groups that can promote their businesses and, consequently, their financial well-being. They should also strengthen their relationship with friends and acquaintances since they are also sources of financial literacy information for their economic empowerment.

Regarding objective four, it is recommended that policymakers should improve financial inclusion among women micro-entrepreneurs. Many microfinance institutions collapsed after the banking sector clean-up in 2018. This reduced the number of microfinance institutions available for women micro-entrepreneurs to access. However, for women micro-entrepreneurs to improve their financial well-being, they should benefit from the usage of financial services and products.

Concerning objective five, the findings indicated that patriarchal culture negatively affects women micro-entrepreneurs' economic empowerment. It is recommended that the Ministry of Gender, Children and Social Protection should embark on intensive education on the need for men to reduce some patriarchal practices that do not help women to achieve their goals in life. It is also recommended that women advocacy groups such as Gender Centre for Empowering Development (GenCED) and Woman Empowered Network (WEN) sensitize the populace on the effects of some patriarchal culture on women micro-entrepreneurs in Ghana.

### **Contribution to Knowledge**

The study contributes to empirical knowledge by establishing that social networks moderate only the relationship between financial awareness and economic empowerment of Women Micro-entrepreneurs as well as usage of financial services and economic empowerment of women micro-entrepreneurs in Ghana. Again, moderating the role of patriarchal culture in the relationship amid financial inclusion and economic empowerment will contribute to empirical studies. Therefore, the study provides contributions for future empirical studies by researchers. Generally, financial knowledge,

financial behaviour and financial attitude are used as proxies in studies involving financial literacy. The study contributes to knowledge by incorporating financial awareness and financial skills as predictors of the economic empowerment of women micro-entrepreneurs.

### **Contribution to Theory**

In contributing to theory, the study found attribution theory, empowerment theory and Kabeer's three-dimensional model to be applicable in explaining how economic empowerment can be attributed to the availability of resources, such as access to and usage of financial products and services. Thus, these theories explain the relationship between the independent and the dependant variables. Again, the study employed patriarchal theory and social network theory in moderating the relationship amid financial inclusion, financial literacy as well as economic empowerment. This is the first-time patriarchal theory and attribution theory have been used in the relationship between financial inclusion and economic empowerment of women micro-entrepreneurs.

### **Contribution to Practice**

Finally, the study contributes to practice by providing women micro-entrepreneurs with an insight into the importance of social networks and the detrimental effects of patriarchal culture on their economic empowerment. The positive role the social network plays in the relationship amid the usage of financial services as well as the decision-making power of WMEs will be recognised by WMEs. Since the quality of financial products and services are required in enhancing financial inclusion, the study provides micro finance institutions an insight of products to help women micro entrepreneurs.

### **Suggestion for Further Research**

The study suggests the following to be considered for future studies:

Firstly, in as much as the Government through Ghana Enterprises Agency provides support for women in Micro, Small and Medium enterprises, there is the need to identify the different economic empowerment needs of each enterprise. Therefore, future studies on women's economic empowerment should be expanded to cover all women enterprises (MSMEs) to find out whether there are differences in empowerment needs between women micro-entrepreneurs, women small entrepreneurs and women medium entrepreneurs in Ghana.

Also, future studies should be conducted on the effect of patriarchal culture on women micro-entrepreneurs in different cultural settings such as the northern and other parts of Ghana to establish the difference in the impact. Future studies should consider digital financial inclusion and financial literacy in the economic empowerment of Micro, small and medium enterprises in Ghana. Furthermore, determinants of economic empowerment of women micro-entrepreneurs in Ghana should also be considered for further study because the study found that other factors explained the variations in both financial well-being and control and decision-making power.

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## APPENDICES

## APPENDIX A

School of Business  
College of Humanities and Legal Studies  
University of Cape Coast

**FINANCIAL LITERACY, FINANCIAL INCLUSION AND  
ECONOMIC EMPOWERMENT OF WOMEN MICRO-  
ENTREPRENEURS IN ACCRA METROPOLIS, GHANA:  
MODERATING ROLE OF SOCIAL NETWORK AND PATRIARCHAL  
CULTURE**

## QUESTIONNAIRE

**Dear respondent,**

I am a PhD in Business administration candidate of the University of Cape Coast School of Business. I am investigating the topic “financial literacy, financial inclusion and economic empowerment of women micro-entrepreneurs in Accra metropolis, Ghana”. You have been selected to fill out the questionnaire which will not take you more than thirty minutes of your valuable time. Your opinion is of much importance to the study and any information provided will be strictly treated with confidentiality and for academic purposes only.

Please, answer the questions as honestly as possible.

**SECTION A: Background information of respondents.** Please *tick/fill in* what applies to you.

1. Age

20 -29 [ ]

30- 39 [ ]

40-49 [ ]

50-59 [ ]

Above 60 [ ]

2. Marital status

Single [ ]

Married [ ]

Cohabiting [ ]

Divorced or separated [ ]

Widowed [ ]

3. Kindly specify the highest degree of formal education you have attained.

No formal education [ ]

Up to SHS/WASSCE [ ]

Technical/ Vocational/O level/ A level [ ]

Diploma/HND [ ]

Bachelor's Degree [ ]

Master's Degree or higher [ ]

Others (please specify) .....

4. No of children

None [ ] 1 [ ]  
 2 [ ] 3 [ ]  
 4 [ ] Above 4 [ ]

5. Nature/Kind of business venture (please tick as appropriate)

Retail trading [ ] Services [ ]  
 Agro-processing [ ] Manufacturing [ ]  
 Other (specify) .....

6. For how long have you been in business (please tick as appropriate)

1-5 years [ ] 6-10 years [ ]  
 11-15 years [ ] Over 15 years [ ]

7. No employees

None [ ] 1 [ ]  
 2 [ ] 3 [ ]  
 4 [ ] Above 4 [ ]

8. How much is your business capital?

Less than GH¢2,000 [ ] GH¢ 2,000 to GH¢ 3,000 [ ]  
 GH¢ 3,001 to GH¢ 4,000 [ ] GH¢4,001 to GH¢ 5,000 [ ]  
 Above GH¢ 5,000 [ ]

Please indicate the extent to which you agree with the measurement on a scale of 1 to 7 (from 1= least agree to 7= strongly agree)

#### SECTION B: FINANCIAL LITERACY

	Financial Awareness	1	2	3	4	5	6	7
FAW 1	I am aware of the existing savings interest rate							
FAW 2	I am aware of the existing loan interest rates							
FAW 3	I am aware of the existing inflation rate							
FAW 4	I have an awareness of the existing financial services							
FAW 5	I have an awareness of the existing financial risk							
	<b>Financial knowledge</b>							
FKN 1	If I put money into a bank account with a 15% interest rate and the yearly inflation rate is 19%, I will be able to purchase fewer goods and services the following year.							
FKN 2	Taking GH¢10,000 now is better than taking GH¢11,000 in one year time if the interest rate is 15%							

FKN 3	If I borrow GH¢10,000 from a financial institution at an interest rate of 15% per annum and I am to pay back the amount plus interest next year, I am likely to pay GH¢11,500						
FKN 4	Suppose five friends are given a gift of GH¢2,000 to share and they are sharing it equally, it is likely each would get GH¢400						
FKN 5	When I deposit money into a savings account I will get more interest than my current account						
FKN 6	High inflation means that the cost of goods and services is rising.						
FKN 7	When I apply for an insurance policy the compensation I will receive depends on how much I pay as a premium						
	<b>Financial Skills</b>						
FSK 1	I can access financial investment opportunities						
FSK 2	I can use an ATM to deposit money						
FSK 3	I can use online business						
FSK 4	I can estimate the cost of the money						
FSK 5	I can estimate returns on investments						
	<b>Financial attitude</b>						
FAT 1	I believe that saving some of my business income is worth it.						
FAT 2	I believe about the worth of obtaining loans for investment						
FAT 3	I believe in the importance of preparing a budget						
FAT 4	I believe in using debit cards to withdraw money						
FAT 5	I believe in using mobile banking						
	<b>Financial Behaviour</b>						
FBH 1	I save extra money for other investment opportunities						
FBH 2	I prepare and review my budget						
FBH 3	I make my bill payments on time						
FBH 4	I closely monitor my spending.						
FBH 5	I do business online						

**SECTION C: FINANCIAL INCLUSION**

	<b>Access</b>	1	2	3	4	5	6	7
ACC 1	There is a usable access road leading to the nearest formal financial institutions							
ACC 2	The nearest formal financial institution is less than 1km from my business location							
ACC 3	I live close to an ATM that I can easily visit to access my account							
ACC 4	There are formal financial institutions that I can easily visit near my business location							
ACC 5	I have easy access to insurance service providers							
ACC 6	I have access to mobile money transactions							
ACC 7	There are places close to my business location where I can pay my bills							
ACC 8	I have the money required to run a savings account							
ACC 9	I have enough money to purchase insurance services							
ACC 10	The cost of borrowing money from formal financial institutions is affordable							
	<b>Usage</b>							
USA 1	I have saved money for the future by using my savings account.							
USA 2	To prepare for potential crises, I have utilized my savings account.							
USA 3	A financial organization has given me a loan to help me fund my firm.							
USA 4	I have used insurance services for health cover							
USA 5	I have used insurance services for my business							
USA 6	I have used the bank account to receive remittances(money)							
USA 7	I have used my bank to transfer money							
USA 8	I have used mobile money services to pay bills							
USA 9	I have used mobile money services to send money							
USA 10	I have used mobile money services to receive money							
	<b>Quality</b>							

QUAL 1	I am assured of getting customer support on my mobile money transactions							
QUAL 2	When I experience a problem with my mobile money transactions, I get quick help							
QUAL 3	I find mobile money service providers friendly and helpful							
QUAL 4	When I have an unpleasant experience with the services, the bank staff solve the issue immediately							
QUAL 5	Imposing service charges is fair to bank customers (withdrawal fees, payment fees)							
QUAL 6	I am certain of the safety of my transactions when using formal services							
QUAL 7	The bank's ATM service is always available for use							
QUAL 8	I received prompt information regarding my transactions transaction							
QUAL 9	I can carry out my transactions because the banking hours are convenient							
QUAL 10	The formal financial institutions have modern equipment that make transactions easy							

#### SECTION D: ECONOMIC EMPOWERMENT

		1	2	3	4	5	6	7
	<b>Control and Decision-making Power</b>							
CDMP 1	I have control over the income and expenditure of my household							
CDMP 2	I have control over the income of my business							
CDMP 3	I have the autonomy to decide savings option							
CDMP 4	I have autonomy in investment decisions (Selecting investment alternatives)							
CDMP 5	I have the power to get the ownership of assets							
CDMP 6	I have autonomy for the purchase, sale, or transfer of asset							
CDMP 7	I have the power to access and make decisions on credits							
	<b>Financial wellbeing</b>							

FWB 1	I am comfortable with my financial obligations							
FWB 2	I have future financial security							
FWB 3	I have the financial resources that allow me to enjoy life							
FWB 4	I am satisfied with managing my financial resources							
FWB 5	I am satisfied with my present financial situation							
FWB 6	I am satisfied with my future income sources							
FWB 7	I have the resources to enjoy good medical care							

**SECTION E: SOCIAL NETWORK**

		1	2	3	4	5	6	7
SN 1	I have friends with whom I am very close							
SN 2	I have prominent people as friends							
SN 3	I belong to social groups that can come to my aid when I get problems							
SN 4	My family comes to my aid when I get problems							
SN 5	I belong to social groups which frequently meet with other groups							
SN 6	I get information from members of my social networks							
SN 7	People in my network have urged me to set my financial goals							
SN 8	I use the opportunities within my networks to attain my financial goals							
SN 9	I actively participate in activities within my network							

**SECTION F: PATRIARCHAL CULTURE**

		1	2	3	4	5	6	7
PATC 1	My husband/partner/male sibling makes decisions that concern the family							
PATC 2	My husband/ partner/ male sibling contributes to decisions concerning where I do my business							
PATC 3	My husband/partner/male sibling finally decides where we want to stay							
PATC 4	I am responsible for preparing children for school							
PATC 5	I am responsible for cooking for the family							
PATC 6	I am responsible for cleaning, washing dirty clothes and tidying up the house in m							



