



LUND UNIVERSITY
School of Economics and Management

Master's Programme in Economic Development and Growth

The Effect of Microfinance on Women's Empowerment in Ghana

A Meta-Regression Analysis

by

Giulia Martini

gi6368ma-s@student.lu.se

Abstract: Microcredit is often regarded as the best tool for poverty alleviation and women's empowerment. The literature agrees that microcredit impacts positively different aspects of women's lives. However, there are some aspects, including patriarchal norms and culture, that may obstacle to the success of those programs. Hence, the thesis analyzes the effect of microfinance and women's empowerment in Ghana, using meta-regression analysis. I employed 13 papers published between 2011 and 2021. Moreover, I use a thematic review approach to analyze and systematically summarize the findings of qualitative studies. The analysis indicates that there is evidence for a positive relationship between microfinance and women's empowerment. The findings are robust when controlling for the different proxies of women's empowerment, the different regions of Ghana and the different types of microfinance services. I concluded that overall the positive effect of microcredit on different aspects of women's lives promotes empowerment.

Keywords: Ghana; Microfinance; Women Empowerment; Gender; Feminist Theory

EKHS42
Master's Thesis (15 credits ECTS)
May 2023
Supervisor: Prince Young Aboagye
Examiner: Jutta Bolt
Word Count: 16,695

Acknowledgements

I would like to thank my supervisor who has provided me with valuable input for my thesis and also for my future. I am very grateful for what I have learned.

I would like to thank my colleagues of the master for the support, for the fun adventures and the unforgettable trips we have done together. Thank you all for the great talks and for sharing your perspective with me.

I would like to thank all my friends that are distant geographically, but they have accompanied me through everything, both good and sad moments.

Lastly, I would like to thank my family for the great support and for believing me again. I wanted to thank all the strong women of my family for teaching me how to deal small and big problems, you all inspire me every day. I wanted to thank all the men of my family for showing me why we should fight against inequality and discriminations.

Table of Contents

1	Introduction	1
1.1	Aim and Scope	2
1.2	Outline of the Thesis	4
2	Context	5
2.1	Ghana's Financial Sector	5
2.2	Evolution of Microfinance in Ghana	6
2.3	Women's participation in the economy	9
2.3.1	Microfinance and women in Ghana	11
3	Theory and previous research	13
3.1	Microcredit and Women's Empowerment	13
3.1.1	Microcredit	15
3.2	Impact of Microcredit on Women's Empowerment	16
3.3	Challenges of Microcredit	21
4	Theoretical Framework	23
4.1.1	Context:	23
4.1.2	The Feminist Empowerment Paradigm	24
4.1.3	Empowerment Framework	26
4.1.4	Hypothesis	27
5	Data	28
5.1	Data Sources and Collection	28
5.1.1	Selection criteria:	28
6	Methodology	31
6.1.1	Meta Regression	31
6.1.2	Random Effect Model:	32
6.1.3	Thematic Review	32
6.2	Limitations	33
7	Empirical Results	36
7.1	Quantitative studies:	37
7.1.1	Subgroup analysis:	43
7.1.2	Tests for bias	50
7.2	Qualitative studies:	53
7.2.1	Material Pathway	53
7.2.2	Relational Pathway	55
7.2.3	Perceptual Pathway	56

7.2.4	Other.....	57
7.2.5	Challenges	58
7.3	<i>Findings and discussion</i>	59
8	Conclusions	61

List of Tables

Table 1: Selected quantitative studies	37
Table 2: Results of the Meta-Regression, REML model. Dependent variable: women empowerment	40
Table 3: Regression-based Egger test for small-study effect	52
Table 4a: List of papers on microcredit and women empowerment in Ghana	75

List of Figures

Figure 1: Distribution of microfinance institutions by region, Ghana	8
Figure 2: Labour Force Participation in Ghana, 1990-2021	10
Figure 3: Borrowing money source, disaggregated by sex (Ghana, 2021)	11
Figure 4: Conceptual Framework.....	26
Figure 5: Number of qualitative and quantitative studies used for the analysis by Ghanaian regions	37
Figure 6: Forest Plot.....	41
Figure 7: Galbraith plot.....	42
Figure 8: Bubble plot.....	43
Figure 9: Forest Plot of the material pathway dependent variables	44
Figure 10: Forest plot of the relationship pathway dependent variables.....	45
Figure 11: Forest plot of the perception pathway dependent variables.....	46
Figure 12: Forest-plot of the studies of the Bono East Region	47
Figure 13: Forest-plot of the studies of the Great Accra Region	47
Figure 14: Forest plot of the studies of the Upper West Region.....	48
Figure 15: Forest plot of the studies that include different regions	48
Figure 16: Forest-plot of the studies of the Western Region	49
Figure 17: Forest-plot of the studies that analyze loans as independent variable	50
Figure 18: Forest-plot of the studies that analyze susu as independent variable	50
Figure 19: Funnel plot.....	51
Figure 20: Funnel plot with imputed studies.....	53
Figure 21: Forest Plot of the studies using OLS estimation method.....	90
Figure 22: Forest plot of the studies using logit estimation method	90

1 Introduction

Microcredit has been used as a tool to improve the welfare of people in developing countries for the last decades. Different studies show that microfinance is positively linked to economic growth (Lopatta & Tchilov, 2015), life satisfaction (Becchetti and Conzo, 2013), and reduced poverty (Hermes 2014) and child mortality (Posso and Athukorala, 2018). Access to credit has been linked to economic success in countries where the financial sector is less developed (Vanroose and D'Espallier, 2013).

In some developing countries, it is more common that women are more discriminated against when they ask for a loan (Diaz-Serrano & Sackey, 2023). This is because they have fewer inheritance rights or own less or no property (Norwood, 2014). So, women offer fewer assets as collateral for their loans (Ebenezer et al., 2020). Furthermore, there are additional factors that contribute to gender inequality that is rooted in society (Ganle & Segbefia, 2015). Those include low levels of education, poor health knowledge and status, and norms and values that promote sexist customs (Anyidoho & Manuh, 2010). Consequently, since women are discriminated against and part of the poorest share of the population, focusing on them would reduce socioeconomic issues such as poverty or gender inequality (Oteng-Abayie et al., 2022).

For this reason, in 2004 the government of Ghana implemented a set of policies¹ to reduce poverty, decrease the gender gap and eradicate other forms of discrimination. Within this framework, the government of Ghana has introduced the Ghana Microfinance Policy which regularizes microfinance institutions and tries to include more vulnerable groups in the financial system (Diaz-Serrano & Sackey, 2023; Government of Ghana, 2006). Diaz-Serrano and Sackey (2023) find that this policy has indeed included more women in the microcredit services. However, the impact of microcredit on women's empowerment in Ghana has not been found consensus. On one hand, some studies find a positive effect of such programs (Addae-Korankye & Abada, 2016; Nukpezah & Blankson, 2017). For example, Norwood (2015) finds that women that are members of microcredit institutions are more empowered. More specifically, she finds that women that use microcredit have more autonomy, they have more control over their family planning and they oppose more on gender violence. On the other hand, Ganle and Segbefia (2015) find that not all women benefit from access to microcredit. In fact, they find that women that end up being more empowered by microcredit are the ones that already had a business or some sort of activity; while the women that were new to money loans got more vulnerable (Ganle and Segbefia, 2015).

1.1 Aim and Scope

Microfinance is not a new financial tool in Ghana. Some researchers believe that there were informal institutions of microcredit already in the 19th Century in the region (Ghana and Nigeria) (Bonsu, 2022). However, it became popular again, with the creation of the Grameen

¹ The Government of Ghana developed the National Gender and Youth policy that was created with the aim of addressing inequality and well-being of the two discriminated groups, women and youths (Diaz-Serrano & Sackey, 2023). Subsequently, the government promoted another policy, the Ghana Microfinance Policy (GHAMP), that promoted microcredit as a tool to reduce poverty and empower women (Government of Ghana, 2006).

Bank by Mohammed Yunus, in the 1970s. Since then, microcredit has been promoted as the solution for poverty alleviation and empowering women (Kabeer, 2005b). In Ghana, microcredit beneficiaries keep increasing every year. The government of Ghana has then promoted reforms in order to make microfinance more inclusive for women (Diaz-Serrano & Sackey, 2023). However, some studies have found that when women are beneficiaries of microcredit, they are subject to domestic violence (Ahmed, 2008). The reason for which microcredit may have negative outcomes is that when there are strong patriarchal norms, when men feel threatened or that they are losing control over their wives, they become violent (ibidem). Other negative outcomes that were reported in Ghana include not having control over the loan, not being able to repay it or having difficulties creating a profitable business (Afriye et al, 2020; Alhassan & Bambagi, 2006; Amankwa et al, 2021; Boateng & Poku, 2019). Notwithstanding all these negative outcomes, most researchers find positive results when studying how microcredit affects women's empowerment. Further research is needed to understand the specific outcomes of microcredit in Ghana. The aim of this paper is to analyse the different papers and find what is the summary effect of the programs on women's empowerment. In other words, this paper aims at identifying the relationship between microfinance and women's empowerment. Consequently, this thesis seeks to answer the following research question:

How does microfinance affect women's empowerment in Ghana?

To answer the research question I have employed two different analyses, meta-regression and thematic review. The data that I have used include 13 quantitative papers and 31 qualitative papers that have been published between 2002 and 2023. Using a meta-regression, I found a positive relationship between microfinance and women's empowerment, also when controlling for the different regions, types of microfinance services or the different dependent variables that have been used by the different papers. To analyse the qualitative papers, I used a thematic review approach, for which I identified three main themes, based on the empowerment framework described in chapter three. Overall, the analyses demonstrate that microfinance has a positive effect on women's empowerment because it positively affects women's economic independence, decision-making, autonomy and self-perception within their families and community. However, microcredit still poses some challenges and obstacles to women that benefit from the programs.

1.2 Outline of the Thesis

The thesis is organized as follows: the second chapter provides an overview of the financial sector and the microcredit industry in Ghana. Section three presents the previous literature on the relationship between microfinance and women's empowerment. Chapter four illustrates the theoretical and conceptual framework that I have used to analyse the results of the thesis. Sections five and six contain respectively a detailed description of the data and the methodology applied. The results, robustness test and the test for bias are shown in section seven. Finally, the last chapter discusses the findings, the limitations, possible policy recommendations and the concluding remarks.

2 Context

2.1 Ghana's Financial Sector

Before the independence in 1957, there were only two Banks in Ghana, namely the British Bank of West Africa (BBWA) and Colonial Bank, which were owned by the United Kingdom² (Mensah, 2017). They provided services only to British nationals because the Ghanaian entrepreneurs lacked 'of a reputation for commercial reliability, poor accounting records that made it difficult to assess their credit worthiness, inability to banks with acceptable security, lack of fixed capital assets which can provide a margin of collateral for advances and the tendency to be secretive over financial and commercial matters' (Mensah, 2017, p. 119).

Hence, when Ghana attained independence, the newly elected President Nkrumah started structural changes to the banking system. The first change was to establish the Bank of Ghana (Mensah, 2017). It followed a long list of changes that include the creation of the National Investment Bank in 1963, and the Agricultural Credit and Cooperative Bank in 1965 (Mensah, 2017).

After the period of governance of Nkrumah, the financial sector underwent further changes. As McKinnon (1973) and Shaw (1973) described it, the system was repressed and needed to be liberalised (Mensah, 2017). The government of Ghana (GoG), together with the World Bank

² Mensa (2017) reports that the first two Banks in Ghana were opened as branches of the Bank of West Africa, which later became Standards Chartered Bank, and the Colonial Bank, later known as Barclays Bank. The head offices were introduced later (only in 1960s, after the independence) and were controlled by the 'home country', the United Kingdom.

and the International Monetary Fund, created an Economic Recovery Programme (1983) that started to liberalise the market (Mensah, 2017). The Financial Sector Adjustment Programme followed in 1988 and created positive changes such as increased number of banks, the market concentration decreased³, the banking system stabilized.

In the 1990s, the government of Ghana took the next step and created a new framework to include also non-financial institutions in the system. Additional reforms were implemented in the early 2000s, to promote and stabilize the sector (Mensah, 2017).

2.2 Evolution of Microfinance in Ghana

Microcredit has become very popular since the economist Muhammad Yunus created the Grameen Bank and started developing programmes for women in Bangladesh in the 1980s. Since then, microfinance has been used as a tool to improve the welfare of people in developing countries. However, it is less known that a form of microfinance was already existing in the African continent in the 19th Century. Different African countries, like Ghana, Nigeria and Sierra Leone have forms of microcredit and savings (susu) that predate the Grameen Bank (Bonsu, 2022; Bouman, 1995). Susu is a voluntary group in which participants collect money for a fund, and allocate it to one of the members in rotation until everybody has had their part (Bonsu, 2022). Some studies would place the origins of Susu in West Africa already in the 19th Century (Bank of Ghana, 2007; Bonsu, 2022). Susu has still a very important role in the Ghanaian economy because it provides access to credit to all the people that rely on informal activities (Bonsu, 2022).

³ The share of the biggest banks reduced from 83% to 60% between 1994 and 1996 (Mensah, 2007).

In the 1950s, the government of Ghana started working on policies and programmes to reduce poverty (Addae-Korankye, 2020). One of the policies that were implemented was subsidized credit to people that needed it (Bank of Ghana, 2007). In the same period, Catholic missionaries from Canada started settling in the Northern part of Ghana, where there was, and still is, a higher concentration of poor people (Bank of Ghana, 2007). In 1955, the Missionaries founded the first credit union in Africa (Bank of Ghana, 2007).

Between the 1960s and 1970s, NGOs became the main providers of microfinance products, because self-sufficiency and financial sustainability were seen as very important (Bank of Ghana, 2007). In the same period, the Agricultural Development Bank and Rural and Community Banks were established to promote lending in rural areas (Bank of Ghana, 2007).

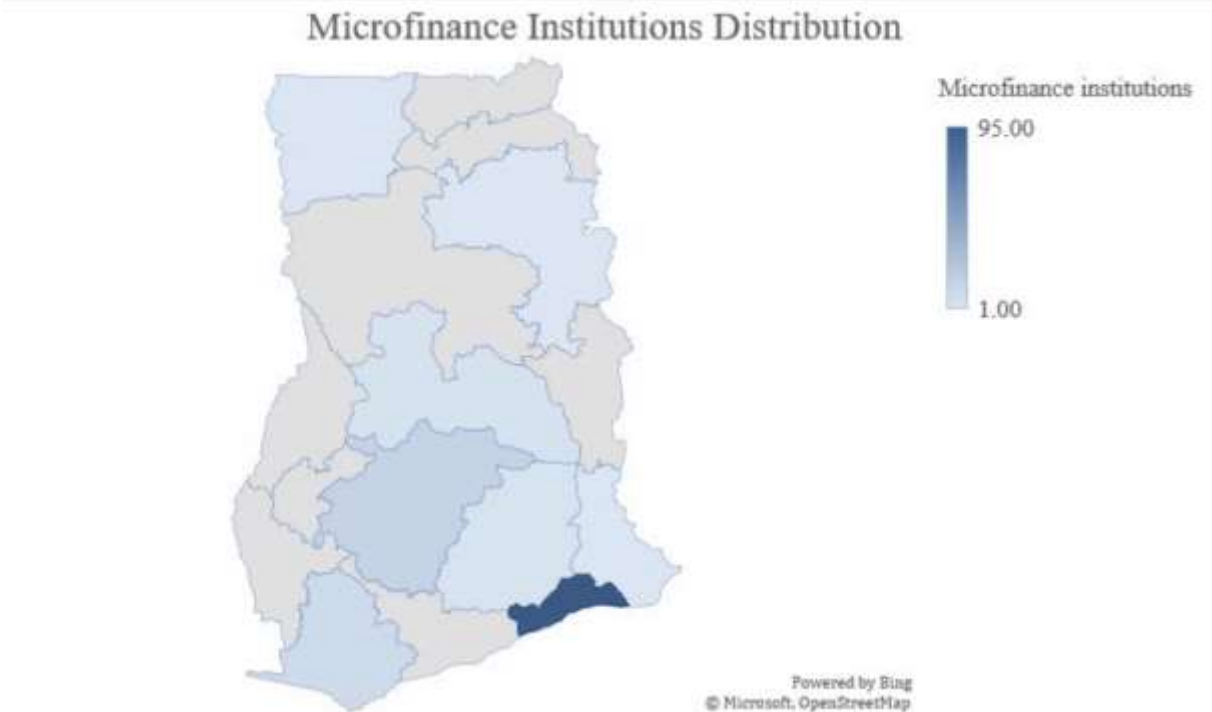
In the 1990s, the Bank of Ghana created a framework to formalize the institutions (P.N.D.C.L. 328, the Financial Institutions (non-Banking) Law, 1993). Right after, microfinance institutions (MFIs) started to become commercial and common. The current regulatory framework was promulgated in 2004, as the Banking Act (Act 673), which defines and determines what are all the different legal financial institutions in the country (Bank of Ghana, 2007). To include informal microcredit institutions, the Bank of Ghana released the Non-Bank Financial Institution Act in 2008 (Act 774), which together with Act 673, regulates the activities of any kind of financial institution.

In order to stabilize the financial sector, the Bank of Ghana changed the requirements and the minimum requirements of financial institutions that can operate in the country (Bank of Ghana, 2007). For this reason and to protect the consumers, the Bank of Ghana has started revoking licences due to insolvency (Bank of Ghana, 2007). The number of microfinance institutions has drastically decreased since.

Today, 132 registered microfinance institutions are distributed in the different regions of Ghana (Figure 1). Most of the organizations (95) are located in the Greater Accra Region, which is the region of the capital, Accra. The reason could be that proximity to the different institutions may be convenient for the main branches of the microfinance institutions. The region with the

second highest frequency (14) is the Ashanti region, which is the second region per population⁴, meaning that potentially there is more demand for the services.

Figure 1: Distribution of microfinance institutions by region, Ghana



Notes: own calculation, the data was retrieved from the website of the Bank of Ghana. The figure includes only the headquarters of the microfinance institutions that are registered in Ghana. So, there may be branches that are distributed in the region that in Figure 1 show no available data.

⁴ Source: Ghana Statistical Service

2.3 Women's participation in the economy

Women in Ghana face discrimination in different aspects of their lives. The gender gap is often the result of patriarchal norms that benefit men over women (Oduro & Ackah, 2017). The effect of those norms can be seen, for example, in how women participate in household decision-making. The Demographic Health Survey (DHS) finds that in 2014, only 61.6% of Ghanaian women could freely decide on their own purchases, their health care and to visit their family (World Bank, n.d.).

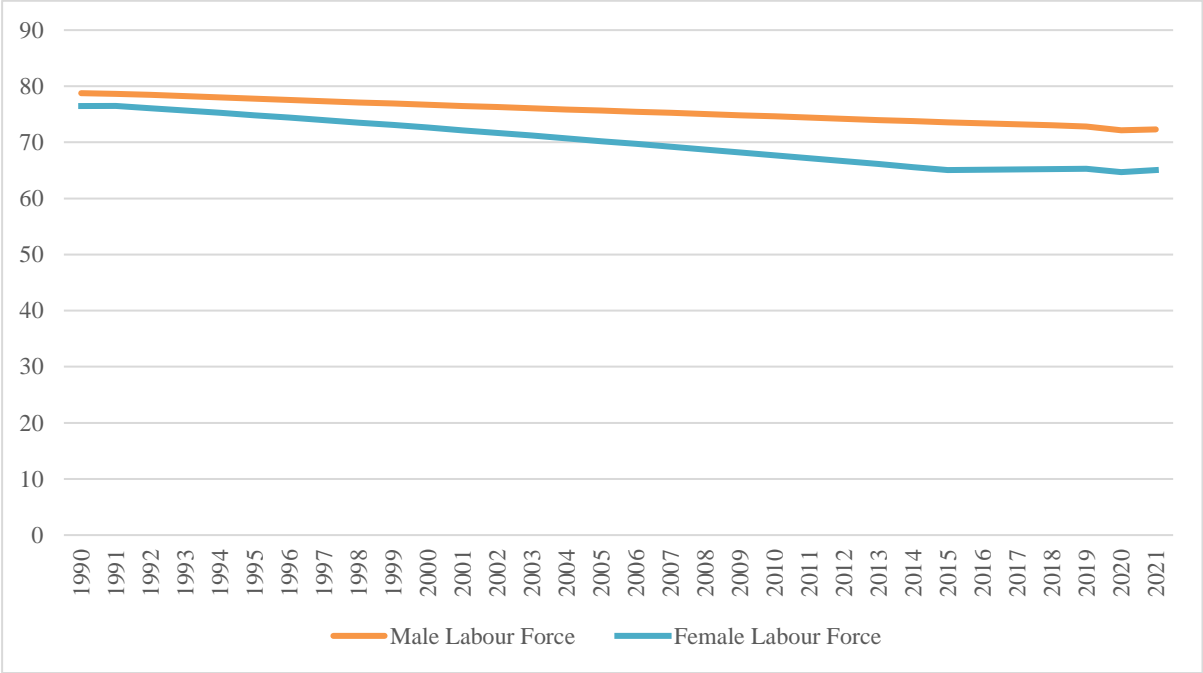
Another important aspect in which women are often discriminated against, and that affect their opportunities in life, is the ownership of property and the inheritance customs (Oduro & Ackah, 2017). In the past, it was not common that women owned land or inherited properties and the results are still visible today (Boateng & Poku, 2019). The difference between women and men owning land is around 10% (DHS, 2014). The fact that they have fewer collaterals affects women's possibility to access credit and as a consequence to start a business, invest in their children's education or increase their consumption.

Female labour force participation is a good indicator of how much women participate in the economy and also a measure of gender equality (Abraham, Ohemeng & Ohmeng, 2017). Different authors use it to understand how much progress has been done to reach gender parity (Abraham et, 2017). The World Bank reports that the share of women in the labour force (65.3%) is lower compared to men (72.4%), and the gap has been increasing for the past three decades (figure 2). Moreover, women are more likely to be employed in the informal sector (78,8%, ILOstat, 2015), which is more volatile and less secure⁵ (Abraham et al, 2017; World Bank, n.d.). The formal sector is male-dominated because the jobs require education and high-

⁵ World Bank data shows that there is a very big gap (18,3%) in the rate of women that are involved in vulnerable employment (World Bank, n.d.)

level skills, which are generally higher in the male population (Abraham et al, 2017). In 2017, the Ghana Living Standards Survey reported that 26.7% women have less than basic education⁶ and only 4.9% have advanced education⁷. For this reason, women are still mostly employed in agriculture (39.3%), which is a sector that requires lower levels of schooling.

Figure 2: Labour Force Participation in Ghana, 1990-2021



Notes: source: International Labour Organisation data

Furthermore, women entrepreneurs are rarely in top positions (only 14.9%) and often do not own the property of the business (only 31.6% of firms in Ghana have female participation in

⁶ No-schooling or pre-primary school (International Labour Organization, n.d.)

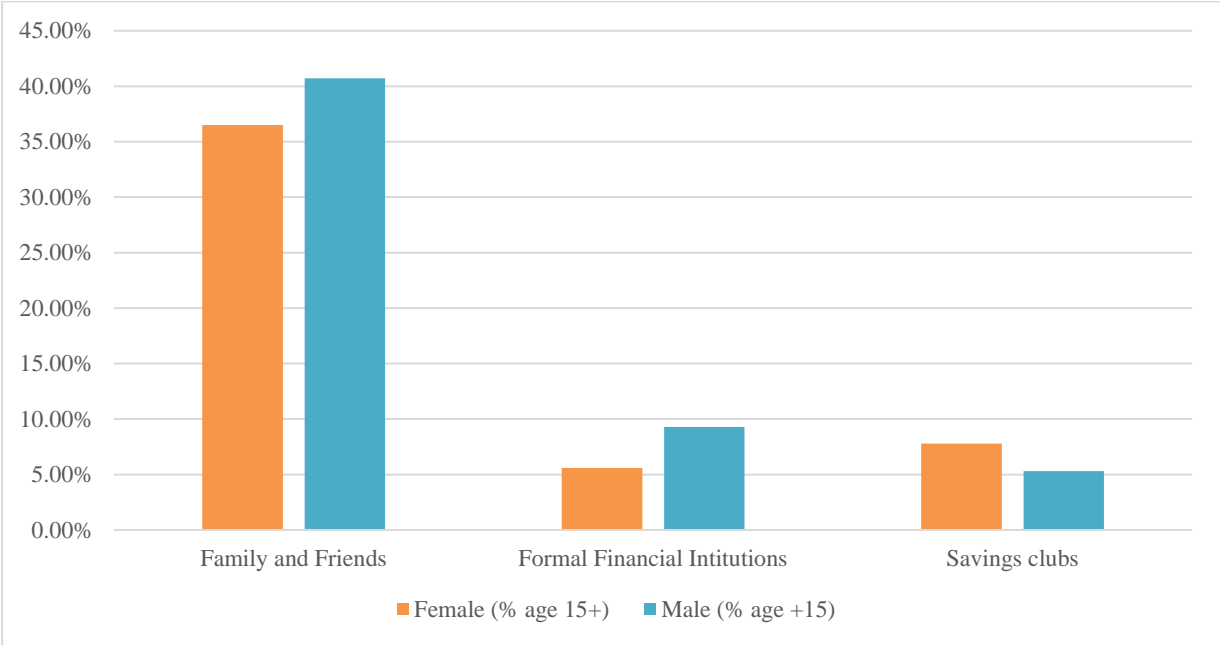
⁷ First or second stage of tertiary education (International Labour Organization, n.d.)

ownership) (World Bank, n.d.). Hence, women's integration in decision-making and in economic life is still a process that is going on.

2.3.1 Microfinance and women in Ghana

Women are a very big share of beneficiaries of microcredit services (Bonsu, 2022), even if they still participate less compared to men. In 2021, Bonsu (2022) reports that women not only constitute a big share of borrowers but that they have also been actively participating and involved in different forms of microfinance for years. However, since they have less access to formal financial institutions (Figure 3), they often prefer informal forms of borrowing.

Figure 3: Borrowing money source, disaggregated by sex (Ghana, 2021)



Notes: source World Bank

Moreover, the World Bank (n.d.) reports that women represent only a smaller share of the owners of financial accounts. In fact, in 2017 only 54% of women in Ghana had an account in either a bank or another formal or informal financial institution, compared to 74% of men. Moreover, when they borrow money, women are more likely to affiliate with a savings club instead of a financial institution, compared to men. Bonsu (2022) finds that women prefer going to Susu clubs because are easier to access (compared to banks or other financial institutions, which would require collaterals or other more binding requirements) but also because women

feel safer since they know and trust them. So, even if women are often targeted by microcredit, in Ghana are still discriminated against or not fully involved in the system.

To sum up, Ghanaian women are more often participating in informal institutions, both when it comes to their work and the way they get access to credit. The role of microfinance can be very important, since it can give women a tool to participate in the economy, for example starting a business or investing in an existing one. Given the context, analyzing the role of microcredit as a tool of women's empowerment is very important in Ghana.

3 Theory and previous research

Microfinance is often referred to as one of the main tools to alleviate poverty and empower women in developing countries. For years, it has been proclaimed that the programs were beneficial and for this reason, they reached different parts of the world, Asia first and then Africa and South America. Different papers showed a positive relationship between microfinance and income, savings, and consumption. However, several studies demonstrated that there is not a statistical relationship between microcredit and the improvement of the well-being of participants.

The following section presents the empirical literature on microcredit and women's empowerment. First, it presents the concept of women's empowerment and of microfinance. Second, it describes the relationship between the two variables, in different countries and then in Ghana. Third, I depict briefly what are the challenges that the beneficiaries have when they engage with microfinance services.

3.1 Microcredit and Women's Empowerment

Before defining women's empowerment, different authors highlight the importance of first describing the meaning of power (Kabeer, 2005; Mosedale, 2005). This is because the two concepts are strongly linked. Thus, to have a better understanding of what empowerment should be, it is important to determine and define what power is. Power has three dimensions, power within, power to and power with (Mosedale, 2005). "Power within" can be defined as self-esteem by Mosedale (2005). "Power to" is the possibility to change things, to go behind the boundaries. Finally, "power with" is the recognition that collective action can accomplish more than an action by a single person. Several authors believe that to be empowered, people should be able to use power in its different declinations without any limitations (Kabeer, 2005; Mosedale, 2005).

In the literature, the concept of empowerment has been described in many different ways. Some authors see empowerment as a process through which discriminated people obtain some power

over their lives (Ganle et al. 2015; Kabeer 2001, Fernando, 1997). Others see it as the ‘control over asset, intellectual resources, and ideology’, since the word itself incorporates the word power (Batliwala, p.129, 1994). In other words, a woman is empowered when she has the possibility to make decision over her life without being influenced or forced by other members of the family or community. Therefore, the empowerment goal is to change norms and institutions that discriminate against minorities (Batliwala, p. 130, 1994), or in this case women.

Furthermore, empowerment is often referred to as a multilevel or multidimensional concept (Norwood, 2014). Women’s empowerment includes elements like independence in decision-making, mobility, political involvement, and freedom from violence (Norwood, 2014). Those elements refer to different levels in which a person should be able to express their autonomy. Therefore, to be fully empowered, a person should be able to act freely at the household-, community-, market- and state-level (Sen and Batliwala, 2000). Similarly, Stromquist (1995) sees empowerment as a socio-political concept that includes many different components such as the economic, psychological and political.

The most common definitions used are the ones of Kabeer (2005) and Mosedale (2005). The first author defines women empowerment as ‘the processes by which those who have been denied the ability to make choices acquire such an ability’ (Kabeer, 2005a, p. 13). While the second one, as ‘process by which women redefine and extend what is possible for them to be and do in situations where they have been restricted, compared to men, from being and doing’ (Mosedale, 2005, p. 252). In her definition, she highlights four different aspects that characterize the process of empowerment: i. to empower somebody, they have to be disempowered; ii. empowerment cannot be imposed over a group of people, but it needs to be claimed it; iii. it should give the possibility to people to decide for their lives and make them able to pursue any action to change their lives; iv. empowerment is a process (Mosedale, 2005). In this thesis, I use Mosedale (2005)’s definition of empowerment because it clearly states all the different elements including who it refers to, how it works and the outcomes of the process.

Since empowerment is such a complex concept, there are many ways in which it can be promoted. Cornwell (2016) suggests some factors and lessons learned from institutions that tried to support women. Providing support and a medium to finance their activities is one. Other authors suggest that inclusive finance, and more specifically microcredit, is one of the best tools to promote empowerment (Ganle et al, 2015; Norwood, 2014). The reason why microcredit is a very popular program in international development is that it gives access to a source of

economic independence. For this reason, microcredit is often seen as a catalyst for other positive outcomes such as autonomy, increased participation and respect within the household and community, decision-making (Drolet, 2010). In other words, when beneficiaries gain access to credit, they can become more autonomous in their decision on, for example, how to invest or spend the money.

3.1.1 Microcredit

It aims at reducing poverty, and giving access to credit to the poorest and/or the discriminated groups (Kabeer, 2005b). Thus, it may help to address socioeconomic inequalities. There are many different products that classified as microfinance (Afriyie et al, 2020). First, there is group lending, which involves a certain amount of people that have a joint liability to repay the debt. Second, individual lending, is the one that involves only one person. Third, individual savings to help clients build assets over time (Armendariz & Morduch, 2010, p. 173). Fourth, microinsurance, which is a coverage that was developed for the beneficiaries of microfinance products since most of the moneylenders generally do not have access to other insurances.

There are many ways in which they can be organized or designed, since they need to adapt to different environments and necessities. The most famous microcredit lender, the Grameen Bank offers loans and savings that differ in their characteristics based on the need. For example, they offer a microenterprise loan, a crop loan or a higher education loan. In other cases, they offer training programmes, that are designed to create successful entrepreneurs. So, for example, the training programmes are designed to teach the beneficiaries how to use the money that the organization give through a loan (Hameed, Hussin, Azeem, Arif & Basheer, 2017). Other aspects in which microcredit programs differ a lot are for example the interest rates and the repayment methods they offer. Microcredit is often regarded as a form of loan that is very advantageous because it is designed to help discriminated and poor people. However, sometimes the conditions are not very advantageous, like high interest rates (Alhassan, 2011; Alhassan & Bambangi, 2006; Alhassan et al, 2016; Effa & Herring, 2005; Kusi et al, 2019; Ntim, 2018).

Generally, different entities can offer those financial services. The Bank of Ghana (2011) recognizes as microfinance institutions the following: i. formal suppliers of microfinance like the Rural and Community Banks, Finance Houses and Savings and Loans Companies; ii. semi-formal suppliers like Financial Non-Governmental Organizations (FNGOs) and Credit Unions;

iii. informal suppliers like susu collectors registered at the Ghana Cooperative Susu Collectors Association; iv. public sector programmes like Women in Development Fund.

3.2 Impact of Microcredit on Women's Empowerment

Microcredit is often linked to poverty reduction and many other positive outcomes, however, the results are mixed. Of all the different positive outcomes, microcredit is often linked to a positive impact on wages and nutrition. For example, Chomen (2021) analyse the contribution of one of the main microfinance institutions in Ethiopia, Oromia Credit and Saving Share Company. They find that the intervention has impacted positively on the region where it was implemented. When asked the participant responded that their income has increased (80.39% of beneficiaries declared that their wages increased after using the loan), nutrition has improved, and enrolment of their children ratios have increased. Similar results are recorded also in Ghana. Indeed, when families participate to microcredit programs, children have higher nutrition status (Marquis et al, 2015), better health, and higher rates of attendance in school (Peprah, 2018). Similarly, Abera and Asfaw (2019), reviewing the literature on microcredit and rural poverty, find that microfinance in Ethiopia has led to an improvement in living conditions, particularly through the increase in earnings that lead to higher consumption and higher levels of human capital (families could afford to invest in the education of their offspring). Similarly, In Ghana, Nukpezah & Blankson (2017) find that microcredit has improved the living standards of the lenders through higher access to credit and has increased productivity, leading to higher profits.

Additionally, when analysing microfinance at the macro-level, different studies find positive outcomes. Different panel studies find that microcredit reduces the incidence and the severity of poverty (Bel Hadj Miled & Ben Rejeb, 2018 Imai, Gaiha, Thapa, Ananim, 2011; Zang, 2017). Likewise, when analyzing Central African countries, Tchouassi (2011) finds that microcredit has a role in reducing inequality and vulnerability. A spatial analysis of the impact of microcredit in the different regions of Ghana, has found that microcredit has a negative impact on poverty and inequality (Obengyiye et al, 2022). This means that, where more lenders use microcredit, poverty and income inequality reduce. In Bangladesh, microcredit has contributed to an increase of the national GDP, and rural GDP (Raihan, Osmani & Khalily, 2017). Raihan et al (2017) believe that was possible because microcredit has a direct effect, increasing the

production of goods and services (with the creation of businesses), and indirectly, changing the prices of labour and capital.

On the other hand, Studies like Chowdhury, Gosh & Wright (2005) find that the effects of microcredit are positive only in the short term, while in the long-term it does not contribute to alleviating poverty. Similar studies, carried out in other countries and regions, find similar results. A study that has been done in a rural region of China shows that microcredit has caused marginalization for certain groups of society (Loubere, 2018). Loubere (2018) observes that microfinance has ‘reinforced patterns of inequality, power and subordination’ (Loubere, 2018, p. 601).

Furthermore, Banerjee, Duflo, Glennerster & Kinnan (2015) find that there is no significant relationship between microcredit, health, education or women’s empowerment in Hyderabad, India. Moreover, in the group of beneficiaries, consumption and business profits do not increase. This means that the programme has not changed or improved the welfare of the people participating compared to the sample that did not receive the treatment. Similarly, when analyzing Morocco, Crepon et al (2015) find that microfinance did not have any effect on food expenditure, women empowerment or business outcomes. Some other negative outcomes are often found in qualitative papers, in which the researchers have the possibility to analyze the point of view of the beneficiaries. Ahmed (2008) believes that microfinance, when it excludes men, it can increase domestic violence.

Women and girls are traditionally more discriminated against by customs and traditions (Al-hassan, 2011). This translates into lower enrolment rates, lower wages, no access to credit, high maternal mortality rates (Al-hassan, 2011; Duflo, 2012). A solution that has been praised for many years, is microcredit since it gives access to marginalized groups. In fact, an obstacle for

women to have a sustained life is the limited access to credit⁸ (Addai, 2017). More specifically, in sub-Saharan Africa, the credit access gap between men and women is quite pronounced (Aterido et al, 2013). Access to financial services is important for many different reasons, such as investments in education, on profit-making activities. Those elements directly affect women, but indirectly the overall economy (Aterido et al. 2013; Ebenezer et al., 2020). Furthermore, women, especially when they are poor, lack collateral (Aterido et al., 2013). This is because, they are generally excluded by inheritance and/or they lack property, have lower levels of business literacy and they are less involved in the formal market economy (Aterido et al, 2013).

Moreover, when women are involved in producing income for the household, it can have an impact on household decision-making (Kabeer, 2005b). This is fairly important because it has been proven that when women can make decisions for the family, more daughters can stay in school for longer (Kabeer, 2005b). The female population is generally discriminated against when it comes to schooling, especially when the resources are limited, parents tend to invest more in the sons (Stephens, 2000). Therefore, giving access to credit to women might help, in the first place themselves and then their daughters to have better chances in life.

Therefore, microcredit is a tool that can indirectly empower women, through challenging norms and habits that would relegate women to only the house and care work (Addai, 2017). This could be possible because by giving poor women access to credit, they would have control over the decision making, networks outside their family or communities (Addai, 2017). Other channels through which microcredit could empower women are, for example, group formation and mutual support, or exposure to new ideas, and the opportunity to test leadership roles or responsibilities (Addai, 2017).

⁸ The World Bank Gender Data shows that in Sub-Saharan African the gender gap of accessing finance (11.5%) is higher than in the rest of the world (7.4%).

However, microcredit can also trigger a very complex decision-making process, that may stop women from deciding to participate (Ngo & Wahhaj, 2012). A lot of decisions have to be made, like how to invest the money, how to allocate the money between different things, etc. Consequently, it happens often that women give the money from their loans to their husbands, losing control over it and the possibility to become more autonomous (Ngo & Wahhaj, 2012).

Different settings may have different outcomes since empowerment depends on many different aspects including culture, norms but also the economic situation. For example, in Uganda, microcredit has increased the income of the family of the women that participated, it improved the standard of living, while enhancing women's self-confidence and autonomy within the household (Busingye and Kazooba, 2018). Studying Malaysia, Al-Shami, Razali & Rashid (2018) find that microcredit has a positive impact on women's decision-making. Malaysian women feel empowered because, thanks to their participation to the program, they have a say on mobility, daily and health expenditure, and children's education. Similarly, a survey carried out in rural Bangladesh has found that when women access microcredit, they have a higher degree of decision-making and bargaining power within their families, a better social network and more freedom of mobility (Pitt, Khandker & Cartwright, 2003).

In Ghana, different studies have analyzed the impact of microcredit on women's empowerment, finding many different outcomes. Since empowerment is a multifactorial concept, the effect of microcredit is discussed on different aspects. Different studies find that women entrepreneurs benefit from requesting loans and end up being empowered by it (Addae-Korankye & Abada, 2016). Beneficiaries, investing in personal assets, are often able to increase their productivity and improve their skills and their business (Al-hassan, 2011). Nukpezah & Blankson (2017) who analyse how microcredit affects rural women, find that increased access to credit had a positive impact on standards of living. The reason is that women in the study area did not have access to other forms of loans. Consequently, they did not have the same possibility to develop their own enterprise. The benefits gained from participating are often linked to very specific factors. Most of women are empowered mostly when they were already engaged in some previous economic activity (Ganle & Segbefia, 2015). Another factor that contributes to positive outcomes, as mentioned before, is education (Addai, 2017; Norwood, 2015; Salia et al., 2017). Norwood (2015) finds that women with higher schooling are more autonomous when using microcredit. Moreover, women that participate in microcredit programs are found to have higher reproductive control (Norwood, 2015).

Afriye et al (2020) studying the success factors of microcredit among women, find that there are some common aspects which affect positively. First, whether the decision to access the credit came from the woman or somebody else. They highlight, how in regions where gender norms are stronger and the man is the decision-maker in the family, the initiative of who decides if the woman should take the loan is a determinant for the success of the microcredit. In fact, where men are more dominant, women often lose control over their loans. Second, women struggle to find income-generating activities, because of the male dominance in the local economy. Third, the type of lending is fundamental for positive outcomes. Often, women have argued that, for example, group lending obstacle to their achievements (Afriye et al., 2020). Fourth, business literacy is shown to be a very important skill to have. Thus, Afriye et al (2020) suggest that microcredit programmes should include support to help borrowers in the management of their money. Fifth, it is fundamental that women have control over their loans. Finally, to keep transaction costs low.

Negative outcomes of microcredit are different and often do not refer to the economic outcomes, but they are very relevant in terms of empowering women. Ganle & Segbefia (2015) find that women that were not able to repay their loans, were subject to harassment. Similarly, it has been found that domestic violence may increase due to the increased autonomy that women see when access to credit is granted (Salia et al, 2017). This is because men feel threatened by the change in power dynamics inside the household (Salia et al. 2017). Furthermore, it has been shown that microcredit may also affect negatively young girl's education and well-being. The education may be impacted because daughters may be involved in the family or mother's enterprise, instead of attending school (Salia et al., 2017).

Analyzing the Northern Region, Owusu et al. (2013) find that microcredit did not have empowered women, since it was not able to change or challenge the norm of the area. Other studies, like Al-hassan, 2011, highlight how in the Northern Region patriarchal norms are very strong so, the outcomes are sometimes negative. In those environments, men find it difficult to accept to share their power, so they often appropriate the loan (Ngo & Wahhaj, 2012). Similar findings were collected in the Amhara region, Ethiopia (Geleta, 2016). This demonstrates that the link between microcredit and empowerment is not always guaranteed (Geleta, 2016).

Finally, it is difficult to predict that microcredit alone can change gender norms and discrimination (Busingye and Kazooba, 2018). However, it can be a tool through which women can find more autonomy and independence.

3.3 Challenges of Microcredit

Although microcredit offers various benefits, beneficiaries also encounter some challenges. First, microfinance institutions have difficult conditions to meet. One of the most common issues is that microcredit, sometimes, has high interest rates (Alhassan, 2011; Alhassan & Bambangi, 2006; Alhassan et al, 2016 Effa & Herring, 2005; Kusi et al, 2019; Ntim, 2018). High interest rates mean high repayment prices that may discourage people in need (e.g. people that otherwise do not have access to credit, that do not own property and/or collaterals) (Al-hamin, Hossain & Mathbor, 2013; Bewal, Tamiru & Singh, 2011). For this reason, in Ghana, the repayment rate is lower (71%) compared to Bangladesh (96%) (Alhassan & Bambangi, 2006; Amankwa et al, 2021). Another prevalent problem is that women are asked to have collateral (Affum, 2020; Boateng & Poku, 2019; Effa & Herring, 2005; Ntim, 2018), while it should not be the case since women are often restricted from having access to credit for this reason.

Second, often it does not challenge the gender dynamics and roles that limit women in their daily life. In fact, in some cases, women that participate in programs are denied control of the money by their husbands (Al-hamin et al, 2013; Ganle et al, 2015). In areas in which patriarchal norms are stronger, like in the northern region of Ghana, men see women as their property and as a consequence, they feel entitled to manage their wives' loans (Afriyie et al, 2020; Alhassan, 2011).

Third, it can increase tensions within the household that can escalate into violence (Al-hamin, Hossain & Mathbor, 2013; Ganle et al., 2015). Different studies reported domestic violence as a consequence of women participating in microcredit programs (Ganle et al, 2015). The violence is often caused by the fact that men feel threatened by the change in power dynamics since women, participating in microcredit programs, increase their economic independence (Salia et al, 2017).

Fourth, some women have reported that they have been victims of verbal abuse from the personal of the microfinance institutions, in case they failed to repay the loan (Al-hamin, Hossain & Mathbor, 2013; Ganle et al, 2015). Another form of abuse derives from the pressure of participating in group lending. Women have suffered from moral coercion, intimidation or other forms of aggression (Ganle et al, 2015).

Additionally, different scholars have criticized microcredit as a tool of empowerment because they do not think it can really change or enhance women's lives. Papart et al (2003) highlight how important is to know and understand the environment in which those programs are implemented. Some studies, as mentioned before, find that in an environment in which patriarchal structures are stronger, microcredit has often negative outcomes on the wellbeing of women (Ganle et al, 2015; Salia et al, 2017). Other studies, like Lirap-Fonderson (2002), criticize microcredit as a program to empower women because it can create additional power dynamics, especially when it targets a subgroup of a population and exclude another. Another reason is that microcredit does not challenge the norms or the structure and for this reason cannot fully empower the discriminated people (Lirap-Fonderson, 2002).

To sum up, the literature on the relationship between women empowerment and microfinance finds often positive outcomes such as increased income, and increased savings but also more independence and participation in the decision-making. Notwithstanding the numerous positive outcomes, some papers have revealed that there are some negative consequences and challenges that microcredit poses. Moreover, to prevent negative outcomes, it is very important to understand the environment and the cultural norms of the community, region or country in which microfinance programs are implemented. Thus, my study summarizes, finds patterns and seeks to understand the relationship between microcredit and women empowerment in Ghana.

4 Theoretical Framework

The following section presents the theoretical framework that is used to address the research question.

The framework follows the feminist theory and its approach on microcredit and women empowerment. Based on the theory, what it is important to study and understand is the women's role and their participation in microcredit programs (Drolet, 2010).

4.1.1 Context:

Microcredit has prioritized and targeted women since the mid-1990s, as they were identified as a discriminated group (Drolet, 2010). Moreover, studies have proven that giving access to credit and giving more autonomy to women, it is possible to create growth. Therefore, it is seemed very efficient and profitable to invest on women development.

The Feminist Theory, within the international development context, was developed to criticize the standard assumption on economic growth and the role of women (Drolet, 2010; Boserup, 1970). It first started with Boserup's (1970) 'Women's Role in Economic Development', which launched the Women in Development (WID) paradigm, which shifted the attention to the women's role in production and started supplying women with resources (check Tinker 1990). In this framework, microcredit had an important role, since it gave access to credit to women and educated women about family planning, and health (Drolet, 2010). In the 1980s, a new paradigm was developed to criticize WID, which is known as WAD. It criticized the fact that the previous paradigm ignored that the cause of gender inequality resides in capitalism (Drolet, 2010). The current approach, gender and development (GAD), combined aspects of the two previous ones. First, it recognizes women as a disadvantaged group, since they have fewer opportunities than men in different areas of daily life such as education, work, reproductive control, salary, and property rights (Moghadam, 1998). The discrimination is derived by the structure and norms of society, which create obstacles to women's empowerment (Moghadam, 1998). For this reason, standard economic policies and programs may have different outcomes for women (Moghadam, 1998). Thus, GAD recognizes that structural change should be made

in order to address gender inequality (Drolet, 2010). It emphasizes the losses derived from the exclusion of women from the economy (Moghadam, 1998). Moreover, it focuses also on women's health, reproductive rights, intrahousehold disparities, violence against women, decision-making as a way to reach equality (Drolet, 2010). Consequently, women's empowerment is the key to achieving political, social, economic, cultural and environmental security among all people (Beijing Platform for Action, Fourth UN World Conference on Women, Beijing, 1995, para. 41, quoted in Canadian International Development Agency, 1999, p. 4).

4.1.2 The Feminist Empowerment Paradigm

The feminist empowerment paradigm was developed together with the early microfinance programs (Drolet, 2010; Mayoux 2002 cited in Drolet, 2010). The approach is based on the definition of empowerment that includes equity, equality, and independence (Drolet, 2010). Moreover, it focuses on gender and power structures, as empowerment should change relations between genders in society (Drolet, 2010). For this reason, is also important to discuss the role of power (Parpart et al, 2003, p. 4) and its definition. Empowerment should include all the different declinations of power: power within, power with and power to.

Moreover, since the process necessarily takes place in a certain context, it is important to understand the environment the people that must be empowered live in. In order to do so, it is important to understand the political and economic structure, culture, customs and believes of the area in which programs seek to create development (Parpart et al, 2003).

Empowerment seeks to remove constraints on individual action (Drolet, 2010). So, microcredit can be a tool through which all these elements can be reached. In fact, microcredit giving access to credit to women, create the possibility to increase their independence and economic autonomy. By increasing their economic autonomy, women are able to make decisions for themselves and their children, for example investing in their own business or their children's education. This process, with time, can lead to empowerment.

However, it is also important to highlight that to fully empower women, there is a need to change patriarchal structures. To do so, women need to be agents of the process and not objects (Parmar, 2011), meaning that beneficiaries should not be passive recipients but rather they should be able to decide what is best for them. In fact, feminist theory shifts the focus from

women as the object of study to women as actors. For this reason, Dulhunty (2022) suggests that when measuring empowerment and the effect of microcredit, it is important to also study women's perception of their dignity and whether the program promoted it. Some authors have found that sometimes men encourage women to participate in microcredit programs because they are able to maintain their position of the household head without working (Lairap-Fonderson, 2003, p. 185). In those cases, outcomes that can be perceived as positive may be biased because the power structures have not changed. For this reason, Lairap-Fonderson (2003, p. 186) suggests following Foucault's framework to analyze the outcomes of microcredit on women's empowerment. There are three different ways in which microcredit can create power structures that might prejudice the process of empowerment.

First, microcredit can create power dynamics at the moment that start targeting a certain group of people and exclude others. In this way, policymakers and financial institutions gain regulatory power that permits them to give resources to a selected amount of people (Lirap-Fonderson, 2003, p. 186).

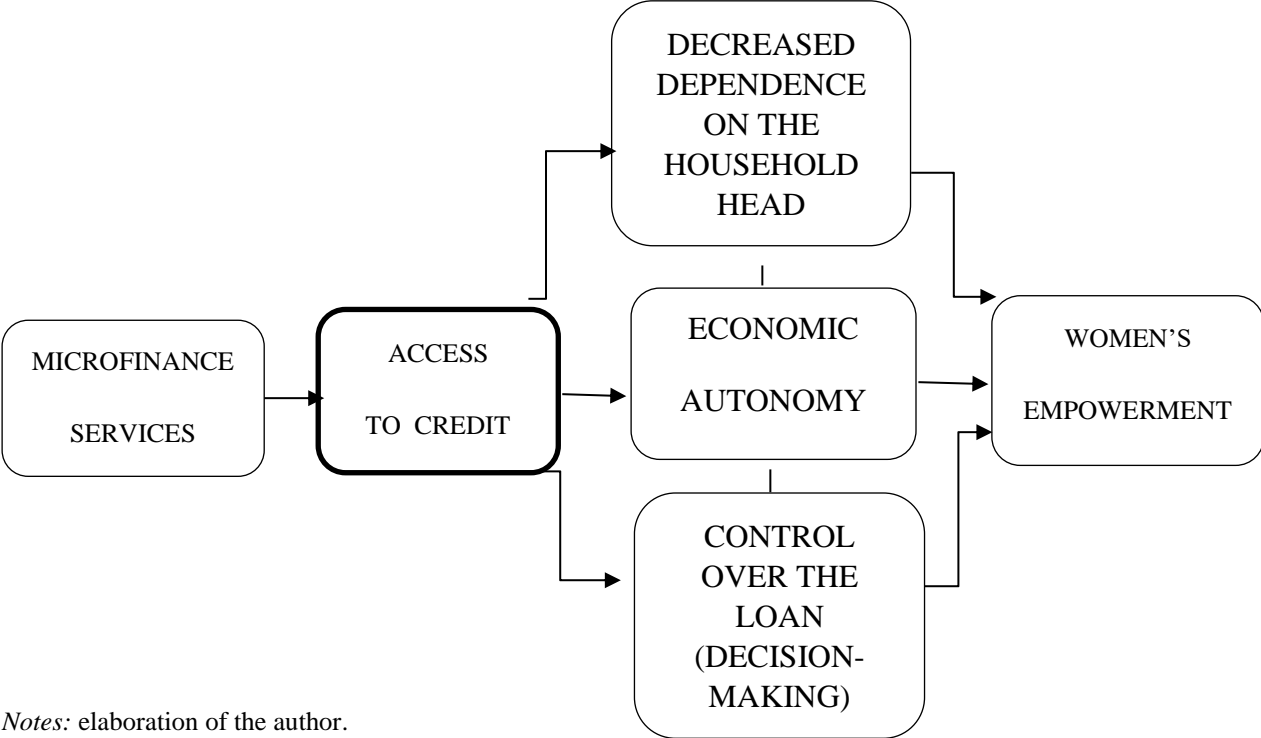
Second, at the microlevel, microfinance can create pressures to conform to pre-existing structures. One of the requirements to make microcredit possible is that beneficiaries repay their loan. The 'best' way to do so is to invest the money into a business or another economic activity that can produce profit. Failure to repay often results in credit withdrawal, without a formal coercion (Lirap-Fonderson, 2003). This way, it promotes what are seen as positive examples of successful entrepreneurs and invites the rest to do the same. However, this can reinforce the hierarchies for which women cannot access larger loans, but only microcredit (Lirap-Fonderson, 2003). This can lead to a strengthening of norms that keep women in subordination (Keating, Rasmussen & Rishi, 2010).

Third, Lirap-Fonderson (2003) argues that microcredit, when, reduces the dependence on the husbands or on the head of the household, microfinance programs can promote empowerment. They do so, for example, by giving women higher availability of income, that they can use for their children's education or to increase consumption of food or other necessary goods (Lirap-Fonderson, 2003).

For this reason, this thesis is not going to focus only on economic results, but rather on a spectrum of different outcomes that can enable women's empowerment. Using a feminist approach, I can analyze the results in a critical manner that can help to understand whether the

desired outcome (women empowerment) can be reached using microcredit. Figure 1 shows the conceptual model of the proposed framework.

Figure 4: Conceptual Framework



Notes: elaboration of the author.

To sum up, this study intends to examine the relationship between microfinance and women’s empowerment in Ghana. Knowing that literature has found that microfinance has mostly positive outcomes, especially for discriminated groups. This is because discriminated groups, namely women, generally have more difficulties to access credit. As a consequence, they have less opportunities and/or chances to invest in economic activities, such as businesses or other things like children’s education. Having the opportunity to decide and to have the possibility to finance an activity, gives. Consequently, giving women access to the different services of microfinance, such as loans, savings and insurance, may increase their wellbeing in many different aspects.

4.1.3 Empowerment Framework

In this study, I follow Ganle et al (2015) methodology to define and measure empowerment. They use pathway matrices to find indicators that will define the concept of empowerment. In their analysis, they use three different matrices that capture other indicators. I have used this

framework because it includes important aspects, like the perception of the women after using the microfinance programme, in respect to their community or their household and, their dependence on their husbands. In fact, as highlighted earlier, for the feminist theory is also very important that the subject of the programme perceives their autonomy and that the power dynamics change. The measure of empowerment is structured as follows:

1. *Material pathway matrix*: it analyses the material and non-material elements that contribute to empowerment (Ganle et. al, 2015). When women are empowered when they can engage in income-generating activities and have the availability of income or savings, due to their participation in microcredit programs.
2. *Relational pathway matrix*: it describes the relationship between the beneficiaries and the members of their household and community (Ganle et al, 2015). If microcredit is empowering women, it should improve the involvement of women in decision-making, their control over loan use and income from loans, and women's freedom from domination and abuse.
3. *Perceptual pathway matrix*: it is based on the women's assessment of their status within the household, family and community (Ganle et al., 2015). As feminist theory highlights, women must perceive that they are less dependent on their husbands after using microcredit. Moreover, microcredit should lead to higher self-confidence and assertiveness, as a sign that women perceive their role as actors in their own lives.

Based on these matrices, I have included different dependent variables as a proxy for women's empowerment for the meta-regression.

4.1.4 Hypothesis

Finally, based on the existing literature and the theoretical framework, this thesis hypothesizes that there is a positive impact of microfinance on women's empowerment in Ghana. Given the positive relationship between microcredit and the different components of microcredit in other regions and the positive outcomes of microcredit in Ghana, I deduce that microfinance may have a positive impact on women's independence, decision-making, economic and social empowerment in the different regions of Ghana.

Thus, my hypothesis is:

Hypothesis: Microfinance has a positive impact on women's empowerment in Ghana.

5 Data

5.1 Data Sources and Collection

I have searched databases of peer-reviewed literature and internet searches for both published and unpublished papers. Searches on microcredit's impact on women's empowerment in Ghana have resulted in around 70 studies. The papers that have been included in this study include 13 quantitative papers and 31 qualitative papers.

The databases that were used to search for the peer-reviewed literature are EBSCO Business Source Premier, Econlit, JSTOR. Moreover, I have used web-based sources such as Google Scholar and LUBsearch. To find other pertinent papers, I have also used back-referencing from current studies. Finally, authors of papers that were not accessible to the public, were contacted.

To find the papers in the different databases and journals I have used different keywords that I combined in different ways. The first set (a) of keywords included microcredit, microfinance, microlending, credit, finance, lending, and loans; to find papers that specifically targeted women I have used women, gender as keywords (b); as proxies for empowerment I have used control, decision-mak, empower, bargain, expense, expenditure, spend; and to be sure that the papers were focusing on Ghana (d), I have included the word in the search. The combination of words that I have used were mostly a + b, a + b + d, a + c, a + c + d, a + b + c or a + b + c + d.

5.1.1 Selection criteria:

This section focuses on the criteria I used to select the literature for the analysis. The selected literature focuses on the relationship between microcredit and women's empowerment (see Table 3a in Appendix A). Most of the papers have used qualitative methods like in-depth interviews, focus groups or discussions. The quantitative studies employed different methodologies that include OLS, logit models, probit models and difference-in-difference

models. All selected studies used treatment groups and most have also included comparison groups.

In terms of types of publications, I have included peer-reviewed and non-peer-reviewed journals, grey literature (e.g. chapters of books, policy reports, study documents) and PhD theses (see Table 1 for a complete list of the journal and the other sources of the studies). Furthermore, to assess the relevance and strength of the internal validity of the papers, I decided to use the following criteria that Vaessen et al (2014) have formulated in their analysis, that is:

Priority 1: studies on the relationship of microcredit on women's empowerment that involve original empirical analysis;

Priority 2: studies on the impact of microcredit on proxies of women's empowerment that have original empirical analysis;

Priority 3: studies that analyze microcredit and women empowerment but do not have a regression analysis or use qualitative methods;

Priority 4: all other studies.

All the studies that include the priority 1 and 2 criteria have include in the meta-analysis, while the priority 3 studies have been included in the thematic review and in the discussion.

From the selected studies, I have systematically extracted information which cover descriptive information such as publication data, dependent and independent variable, type of intervention, summary of the results, region in which the study has been done. Additionally I have also included information on inclusion or exclusion criteria: qualitative/quantitative or other methodology, effect size, standard deviations, p-value, observations.

Due to the heterogeneity of the studies, I conducted a sensitivity analysis that will be discussed further in the chapter of the empirical results. Moreover, more consideration on the limitations of the methodology will be discussed at the end of chapter 6.

Table 4a (in Appendix A) shows an overview of the studies that have been found on the relationship between microcredit and women's empowerment in Ghana. The table presents the summarized finding, the used methodology and some of the relevant data. Study designs differed across studies, with a majority of papers using qualitative methodology which were not included in the meta-regression but in the thematic review. The quantitative studies have used

mostly multivariate regression including logistic, probit and difference in difference estimation models.

Since women's empowerment is a multidimensional concept, some studies included an index or a proxy of empowerment while others used different dependent variables. In those cases, I have included the results for all the different models and dependent variables. More specifically, as proxies of women empowerment, I have used the following dependent variables: women entrepreneurs' profit, economic empowerment of women, social empowerment of women, quality education for the women beneficiaries' children, being able to afford quality healthcare, access to three meals a day, comfortability in the beneficiaries accommodation, women empowerment, autonomy, reproductive control, disapproval of violence, family planning (Addae-Korankye & Abada, 2017; Addai, 2017; Awuah & Amoako, 2014; Eriksen & Lensik, 2015; Norwood, 2011, 2015; Owuso-Danso, 2015). Studies that did not have proxies that were too distant to the definition I have defined in the literature review, were excluded from the analysis.

6 Methodology

In this section, I describe briefly the two different methodologies that I have employed to analyze the papers. The meta-regression (sub-section 4.3.1) was used to analyze the papers that have used a multivariate quantitative methodology (regression analysis). The thematic review approach (sub-section 4.3.2) was employed to analyze the papers that employed interviews or mixed methods to analyze the relationship between women empowerment and microcredit.

6.1.1 Meta Regression

Meta-analysis is an empirical synthesis of a number of studies that analyze the same relationship (Borenstein et al, 2009). Meta-regression refers to the meta-analysis of studies that use regression analysis to study a relationship.

To study the effect of microfinance on empowering women, I have employed a meta-regression analysis. The motivation to use meta-regression resides in the fact that it can summarize what is the effect of microcredit in Ghana, while identifying patterns depending, for example, on which type of microfinance service is employed or in which region the analysis is studied. In fact, meta-analysis allows one to combine data from similar studies⁹ to have more comprehensive and reliable data compared to an individual study. In fact, by increasing the sample, it is possible to increase the accuracy of the results (Deeks, Higgins & Altman, 2019).

⁹ Papers that have, for example, similar research questions, or that study the same relationship.

Furthermore, in case of inconsistent results, a meta-regression can identify the effect size of the relationship, using the data across studies (Deeks et al, 2019).

For the meta-regression, I have, first, extracted the data (beta coefficients and standard errors) to calculate the effect size from the selected papers. Second, I selected which method I should use, which is random effect. Third, I have run all the calculations necessary to study the effect size and the results. Finally, I have interpreted the findings, using the literature and the thematic review, and drawn some conclusions.

6.1.2 Random Effect Model:

I decided to employ random effect, instead of fixed effect model, because of the heterogeneity of the studies I have selected. As Borenstein et al (2021) highlight, the random effect model should be used when, for example, the studies do not have the same population, or do not share all the factors. Moreover, in most cases, if studies have been performed by different researchers, it is best to use random effect model. In fact, random effect model assumes that the true effect differs between the studies. More specifically, in meta-regressions, the random models predict a distribution of effect for studies with similar predicted values (Borenstein et al, 2021). In other words, the effect size is distributed and centered over the predicted value.

The null hypothesis of the model is that there is no linear relationship between the covariates and the effect size (Borenstein et al, 2021). In random effect, the effect size is computed as the mean of the true effect size of all the studies (Borenstein et al, 2021). Another difference between the two models, fixed and random effect, relies on the definition of the variance, that under random effect is computed as “the variance within studies plus the variance between studies (τ^2)” (Borenstein et al, 2021, p. 196). τ^2 in the meta-analysis represents the dispersion of the predicted values on the prediction slope (Borenstein et al, 2021).

Using a random effect model implies that compared to the fixed effect model, the weights that are assigned to each study of the meta-regression do not depend on the size of the sample and the confidence interval will be wider compared to a model that uses fixed effect, for the same reason (Borenstein et al, 2021).

6.1.3 Thematic Review

To analyze the different qualitative papers, I have decided to use thematic review approach. This method allows the researcher to understand the different outcomes and findings, grouping the different topics together. A thematic review can detect patterns in the literature and at the same time it can give an overview of the findings.

The reason I have decided to employ a thematic review of the qualitative papers is that I wanted to identify what is the effect of microcredit on women and whether this form of lending is beneficial to the recipients. Furthermore, it allows to complement the quantitative analysis where the data cannot provide information. In fact, qualitative analyses, like interviews and group discussions, can provide a deeper understanding of the experience but also the perception that women have while and after participating in microcredit programs. Qualitative findings take into account the context where the programs are implemented, which contributes to a better understanding of the observed effects of microcredit (Marshall and Rossman, 2016, p. 206-7).

To perform a thematic review, some steps need to be followed (Aronson, 1995). The first step is to gather the data. In this case, I have searched all the papers that are investigating the relationship between microcredit and women empowerment in Ghana. I have found 31 papers that have been published between 2002 and 2022. The second step is to identify the subtopics and the patterns in the selected literature. After identifying the themes, related patterns are merged and sorted as subthemes. Finally, based on the different sub-themes and related literature, it is possible to draw some conclusions.

6.2 Limitations

It is important, also, to list some of the factors that could bias the results. First, there could be a publication bias, that is when not all the papers that study the chosen relationship are included in the meta-analysis. If the missing studies are random, the bias will be limited to less informative results and wider confidence intervals (Borenstein et al, 2021). If the selection of the missing studies is systematic, the results will be biased and not representative. For example, a bias could be derived from the fact that most of the published papers have not significant results, meaning that the ones that investigated the relationship without finding significant results are not available. This could lead to an upward bias in the results. Another bias could be derived from the fact that most peer-reviewed papers are included in the meta-analysis, while all the available papers (unpublished literature, grey literature, theses, etc.) should be used.

Other factors that can lead to publication bias include language, availability, cost, familiarity, duplication, and citation. To address these biases, the researcher should search and use a comprehensive list of papers.

Another risk of bias is due to the heterogeneity of the methodology employed in the different papers. Two dimensions can cause bias, namely research design and method of statistical analysis (Vaessen et al, 2014). The threats to validity derived from the research design could be, for example, a non-random allocation, the incomparability of the control groups, the risk of confounding, selection and program placement bias. So, those biases are derived from the decision of the researcher that has done the analysis. While the method could bias the results because they may have endogenous variables, small control groups or flawed data (Duvendack et al., 2011). For example, studies that employ OLS and observational data have a high risk of bias because data could be endogenous, which is the case when unobserved or omitted variables influence the relationship. Another bias linked OLS and observational data is selection bias, since the sample is not selected randomly and this is the case when there is a target population. In my study, I address these biases, first doing all the required test, like the funnel plot and the Egger test, that check and analyze whether there is a publication bias.

To address the problem of the heterogeneity of estimation models, I include a sensitivity analysis in which I will divide the papers based on their estimation method, to see if the results are robust (the results can be found in Appendix B). In this way, I identify potential sources of heterogeneity and explore whether the effect size estimates differ based on the methodology employed. The other biases that are linked to other researchers' decisions are out of my control, but I account for the possibility of bias in the discussion of the results.

The methodology that I employ has some limitations that need to be discussed. First, the published papers do not cover all the regions of Ghana, so it is difficult to generalize the results for the whole country. Even if there is heterogeneity and most of the regions are represented, I may have incurred an upward bias since it is likely that it has been published only the papers that have statistically significant results or positive results. The publication bias is indeed reported by the funnel plot (figure 18). Second, the papers included in the meta-regression use different estimation models. The fact that the estimation methods are not heterogeneous, can lead to bias since each empirical method has its own assumptions and risks of bias (Vaessen et al, 2014). Third, meta-regression cannot infer causality, since it only reports the association between studies that analyze the same relationship. Fourth, there are a lot of differences between the types of services that microfinance institutions offer. They differ a lot in terms of requirements, what they offer, the duration of the programme and the repayment. These factors

are partially captured by the results. Finally, the constrained timeframe of the thesis posed some limits to the depth of the analysis.

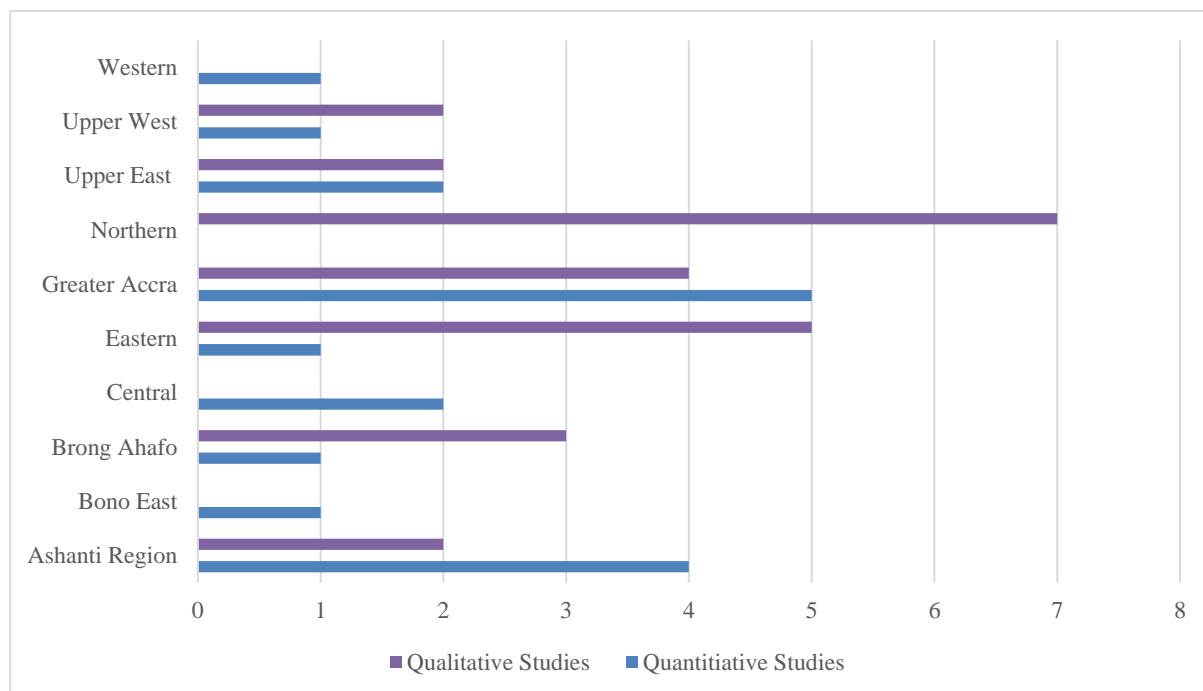
7 Empirical Results

Of the 70 studies that have been found that analyze the relationship between microcredit and women's empowerment, 13 have been selected for the meta-regression and 31 for the thematic review. The remaining studies have been excluded because they were not accessible and/or the author did not give me access to the paper, they were master theses, or they were not relevant because the methodology was neither qualitative nor quantitative.

Microcredit has been studied extensively in different contexts in Ghana. Most of the studies have been carried out in the Greater Accra Region (out of ten, five were qualitative and five, quantitative). However, the Northern Region has the most qualitative studies. Some authors justify the decision to study the Northern Region because poverty is higher compared to the southern regions of the country (Oteng-Abayie et al, 2022). The distribution of the paper is not even and there are some areas that have never been studied by neither quantitative (Northern Region) nor qualitative (Western, Bono East, Central Regions) or both (Savannah, North East, Volta, Oti, Western North). This could be explained by the fact that most of the (registered) microfinance institutions are located in the Greater Accra Region (Figure 1). While regions like Savannah, North East, Oti and Western North, do not have any registered institutions (Figure 1). Those regions have been recently created¹⁰, thus it is more difficult to find studies and or data on analyses carried out there.

¹⁰ In 2018, a referendum imposed the creation of the new regions.

Figure 5: Number of qualitative and quantitative studies used for the analysis by Ghanaian regions



Notes: I have included only the regions that studied reported as the location of the analysis. On the x-axis, there is the absolute frequency of the number of papers that have studied the relationship between women empowerment and microcredit in the respective region.

7.1 Quantitative studies:

Table 1 gives an overview of the paper that I have selected for the quantitative analysis. The table presents the summarized findings and the dependent variable used as a proxy for women's empowerment.

Table 1: Selected quantitative studies

Study	Summarized Findings	Dependent Variable
<i>Acheampong & Alnaa (2013)</i>	Microcredit has a positive effect on expenditure	Weekly consumption expenditure
<i>Addae-Korankye & Abada (2017)</i>	Microcredit has a positive effect on women's profit	Women entrepreneurs' profit

<i>Addai (2017)</i>	Microfinance is positively linked to both economic and social empowerment	Economic empowerment, social empowerment
<i>Akpalu, Alnaa & Aglobitse (2012)</i>	Access to microfinance increases efficiency of women's enterprises	Technical efficiency among the agro-processors
<i>Angko (2013)</i>	Microcredit increases asset score	Change in asset score
<i>Asare-Bediako & Frempong (2016)</i>	Microfinance has a positive impact on beneficiaries.	Female Autonomy Score, Possession Index, Number of Children
<i>Atta Peprah (2017)</i>	Increased access to credit increases the chance of domestic violence.	Domestic Violence
<i>Azanlerigu & Kuntulo (2015)</i>	Microfinance increased incomes	Personal Income
<i>Batinge & Jenkins (2021)</i>	Microfinance services positively correlates to health, education, living standards and poverty reduction.	Health, Education, Standards of living
<i>Norwood (2011)</i>	Ghanaian respondents showed no significant differences in family planning practices between members and non-members.	Family planning
<i>Norwood (2014)</i>	The results show that length of membership is positively and statistically significantly related to autonomy, disapproval of violence and reproductive control.	Autonomy, reproductive control, disapproval of violence
<i>Salia, Hussain, Tingbani & Kolade (2018)</i>	Microfinance create spousal dispute and polygyny.	Poor family cohesion: : (a) spousal disputes, (b) polygyny practice and (c) perceived neglect of female domestic responsibilities.

To analyze the quantitative studies of the sample, I decided to employ the meta-regression. The following section describes the results and the different tests that I have employed to check the validity of the outcomes.

Table 2 shows the results of the meta-regression. The coefficient describes how the effect of women's empowerment (the outcome variable) changes with a unit change of the explanatory variable, microcredit. So, the regression coefficient tests whether there is a linear relationship between the dependent and the independent variable. In the case of microcredit and women empowerment, the relationship is positive and statistically significant, meaning that a unit increase in microcredit participation will increase women's empowerment by 1. Since women empowerment is measured in many different ways in the studies that I have used, I did a subgroup analysis of the different measures, to have a deeper understanding of the impact. The heterogeneity test shows that there is a very low degree of heterogeneity ($\tau^2 = 0.16$, $I^2 = 98.33\%$). Moreover, the R squared shows that 100% of the between study variance is explained by the effect of microfinance. The Wald Chi tests for the possibility that all the coefficients other than the intercept are equals to zero. The results confirm that it is possible to reject the null hypothesis, thus the model is valid. Finally, the Q test for the residual heterogeneity suggests that there is no heterogeneity in the residuals.

Table 2: Results of the Meta-Regression, REML model. Dependent variable: women empowerment

Random Effect meta-regression, dependent variable: women empowerment						
Estimates	Coefficient	Standard error	z	p>z	95% confidence interval	
Microcredit	1	.2239994	4.46	0.000	.5609692	1.439031
Constant	0	1.650194	0.00	1.000	-3.23432	3.23432
Observations	20					
<hr/>						
Tau ²	7.5e-07					
H ²	1.00					
I ²	0.00					
R ²	100.00					
Wald-Chi	19.93		prob			
Q_res	0.00					
Prob>Q_res	1.0000					

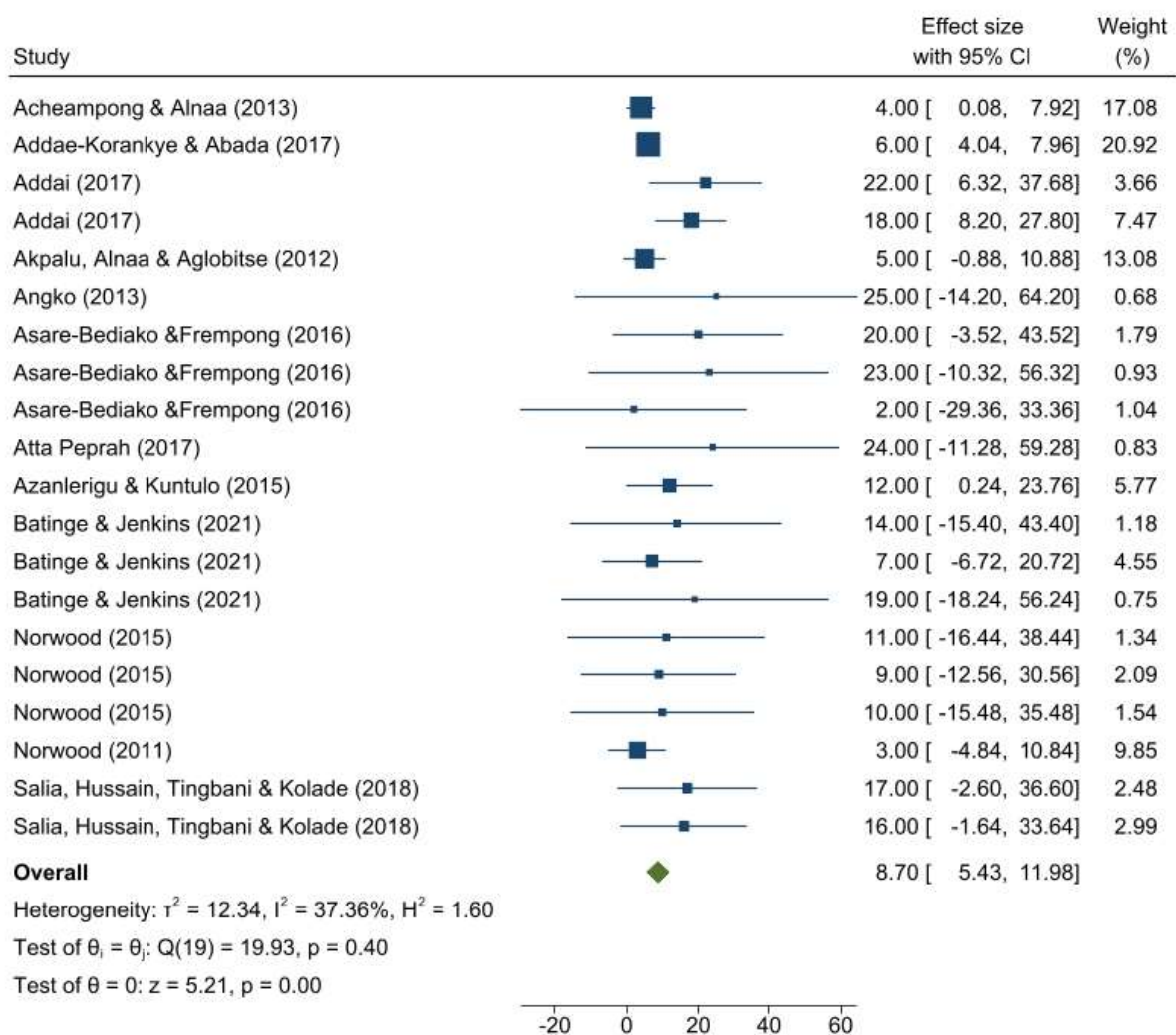
Notes: The table reports the results of the meta-regression for the relationship between microfinance and women empowerment. The dependent variable is women's empowerment or other proxies while the independent variable is microcredit participation. There are 20 observations because some studies included different models with different dependent variables which were proxies for women's empowerment. Thus, I have included some studies multiple times.

Figure 6 shows the results of the forest plot analysis using random effect model. The forest plot depicts the different effect sizes of each study and their confidence interval, and the overall or summary effect. The confidence interval (CI) shows the precision of the study. More specifically, the bigger the confidence interval the less precise is the estimation. Moreover, the chart shows the weight of each paper in the calculation of the average effect, and the heterogeneity of the studies. So, it gives an overview of the results and reports important information of the meta-regression. The heterogeneity test shows that there is a small degree of heterogeneity ($\tau^2 = 12.34$, $I^2 = 37.36\%$). The reported I^2 suggests that 37.36% of the residuals variability is attributed to the between-study variation, while only 62.64% to the within study variation. Finally, it is possible to deduce that the positive effect size is mostly driven by the studies of Acheampong & Alnaa (2013) and Addae-Korankye & Abada (2017) which do not have a very high and positive effect size. Other studies, like Addai (2017), Angko () and Asiare-

Bediako & Frempong (2015) have high effect sizes, however having bigger standard errors, their weight in the results is smaller.

The average effect size is positive and high, indicating that microfinance programs have a significant impact on women’s empowerment in Ghana. The results are in line with the literature, since most of the studies report an increase in income, autonomy and decision-making.

Figure 6: Forest Plot



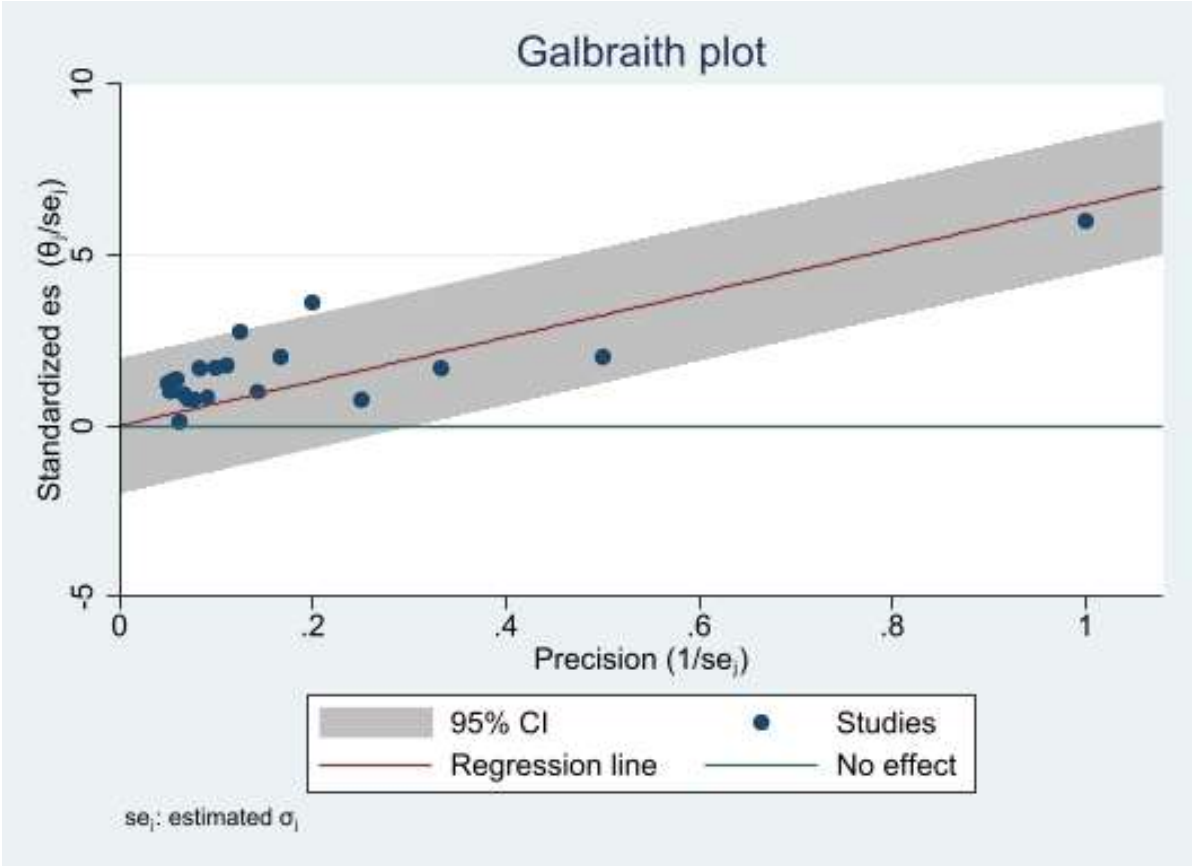
Random-effects REML model

The Galbraith plot shows a summary of the results of the analysis. The graph depicts the precision of the effect size of each study and the overall effect. The studies that lie closer to the y-axis are less precise, which is the majority of the papers analyzed. In fact, the sample sizes

of most of the studies is 300 on average. The red line represents the regression function that passes through the origin and that has the estimated effect size as a coefficient. The upward sloping regression line represents a positive effect size, meaning that microcredit empowers women in Ghana.

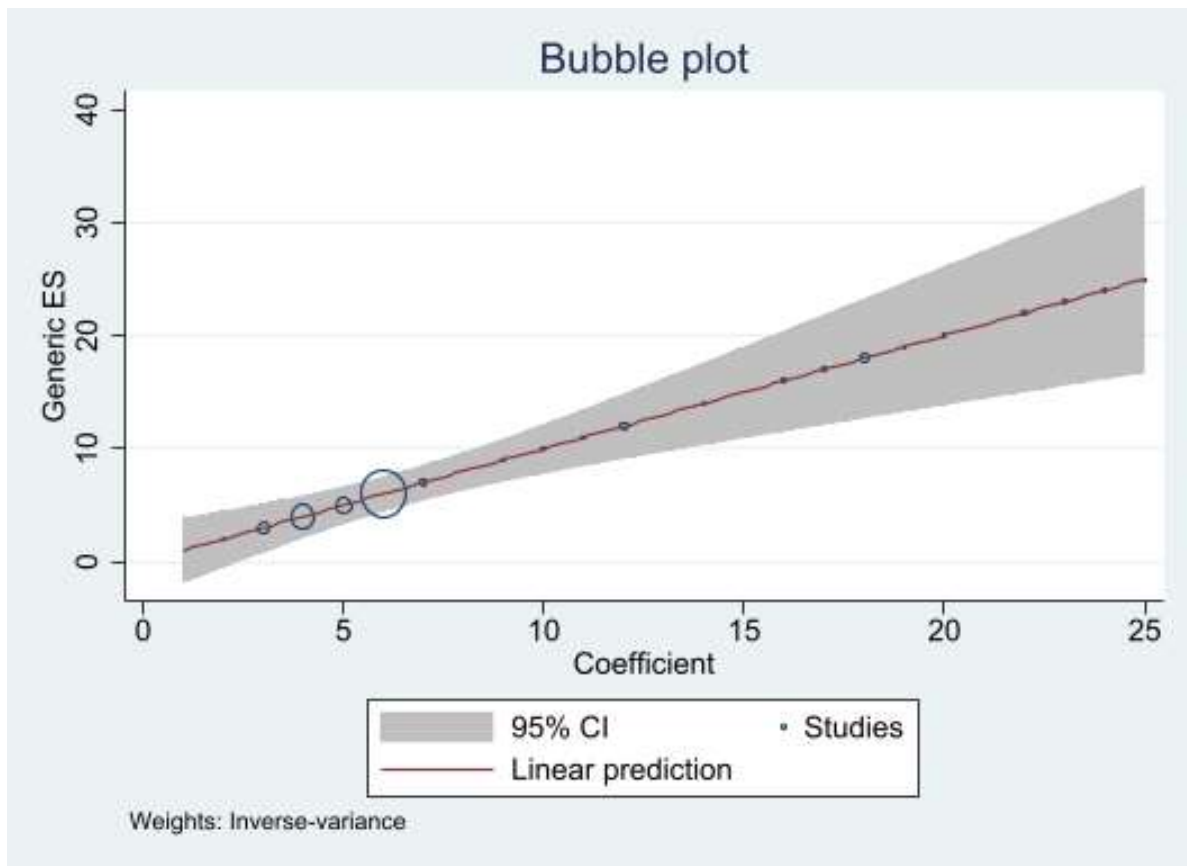
Furthermore, the Galbraith plot can help identify the outliers. Figure 7 shows that there may be an outlier, which is the study that lies outside the confidence interval, that could bias the estimation of the mean effect size. For this reason, I run the analysis without the outliers.

Figure 7: Galbraith plot



Moreover, I have employed a bubble plot (figure 8) to see the relationship between the effect sized of the selected studies and the coefficients of microcredit for each of them. The size of the point (studies) is proportional to the weight of the study that was assigned for the analysis. The vector (the linear prediction) has the same length as the number of studies.

Figure 8: Bubble plot



7.1.1 Subgroup analysis:

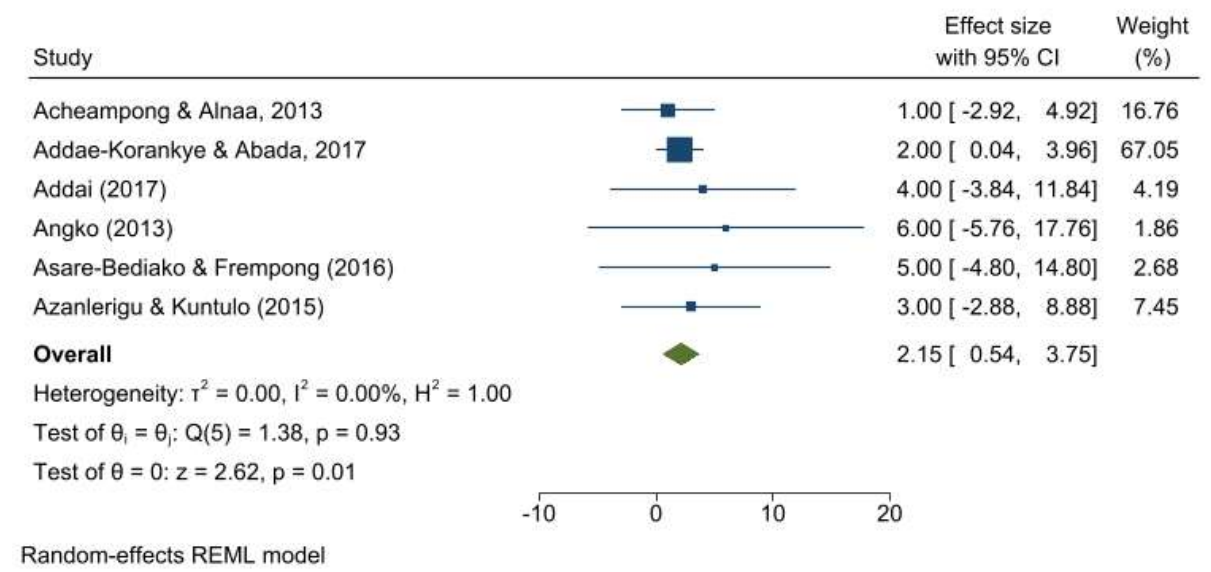
In this section, I have divided the analysis in different subgroups: different outcomes variables, regions and types of microcredit. First, based on the matrices that I have used to define empowerment, I have divided the sample into three subgroups depending on which kind of dependent variable has been used for the regression. Depending on the matrix definitions and the different dependent variables, I have created the three subgroups: i. the material pathway matrix; ii. The relational pathway matrix; iii. The perception pathway matrix. Secondly, I have gathered all the studies from the same regions and analyzed the relationship between women's empowerment and microcredit. Third, I have studied how loans and susu affect empowerment.

7.1.1.1 Empowerment subgroups

Figure 9 shows the results for the relationship between microcredit and the economic outcome variables. The effect size is smaller than the one shown in figure 6 and it is mostly driven by the Addae-Korankye & Abada (2017)'s study. In their analysis, the authors measure how microloans affect women entrepreneurs' profit in Accra. Accra being the capital of the country,

it is possible that the power structures are less strong than in the rural area. Therefore, it is expected that the relationship and the outcomes are positive, as the results show. The fact that this study drives most of the effect size, makes it smaller. Women in the Greater Accra Region probably also have different options to have economic independence or to improve their incomes. While for women in rural areas, the impact of microcredit may be bigger. In fact, one of the studies with the biggest effect size, Angko (2013), studies the microcredit impact on women's assets in the Upper West Region. Tanaka, Nuamah & Geiger (2018) identify the region as one of the poorest in the country. The effect of microcredit differs depending on where is implemented. In poorer regions, the effect may be bigger, because women have fewer opportunities compared to the beneficiaries of, for example, the Greater Accra Region. As I discuss later, in regions like Greater Accra, since the region is richer and has bigger urban areas, women have more opportunities and for this reason, I would expect that the impact of microcredit would be smaller. Consequently, access to credit may have had a greater impact in poorer or more rural regions (see Angko, 2013; Asare-Bediako & Frempong, 2016).

Figure 9: Forest Plot of the material pathway dependent variables

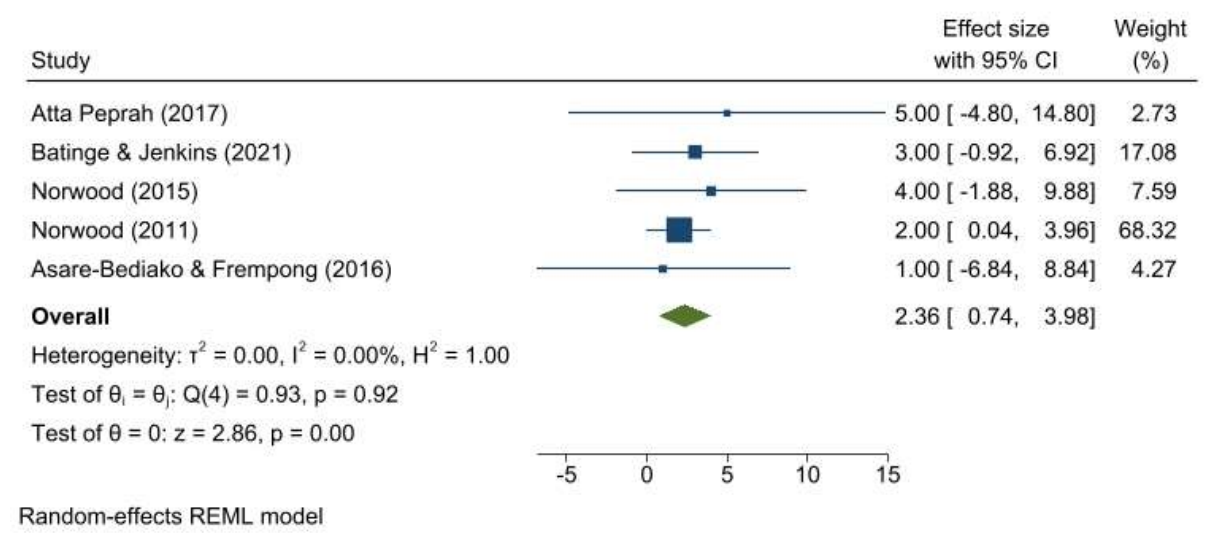


Notes: the dependent variables that have been selected for this analysis are weekly consumption expenditures, women entrepreneurs' profit, economic empowerment, change in asset score, possession index, personal income.

Figure 10 shows the results for the second subgroup, namely the studies that have employed variables that describe the relationship between the women beneficiaries and their families and/or communities. Those variables include domestic violence, investments in the children's education, family planning. The results are consistent with the previous one, as the relationship is positive and its magnitude is equal to 2.35. The p-value (0.00) shows that the results are

significant, even if the heterogeneity is very low (0.00%). Norwood (2011), which is the main driver of the summary effect, finds that microfinance services have very little effect on women’s empowerment, or more specifically, on family planning. The effect may be small because the effect on decision-making, particularly on family planning may be indirect and more complex since it requires knowledge of reproductive health and the availability of contraceptives. On the other hand, in her other paper (Norwood, 2014), which utilizes the same sample and environment, but studies the effect on disapproval of violence, the effect size is higher. The reason may be that since she analyses the relationship in Greater Accra Region, where patriarchal structures are less strong (Zacharias, 2021), microcredit gives women the required autonomy to avoid domestic violence. In fact, in the same study, Norwood (2014) finds that women that participate in microcredit programs have more autonomy.

Figure 10: Forest plot of the relationship pathway dependent variables

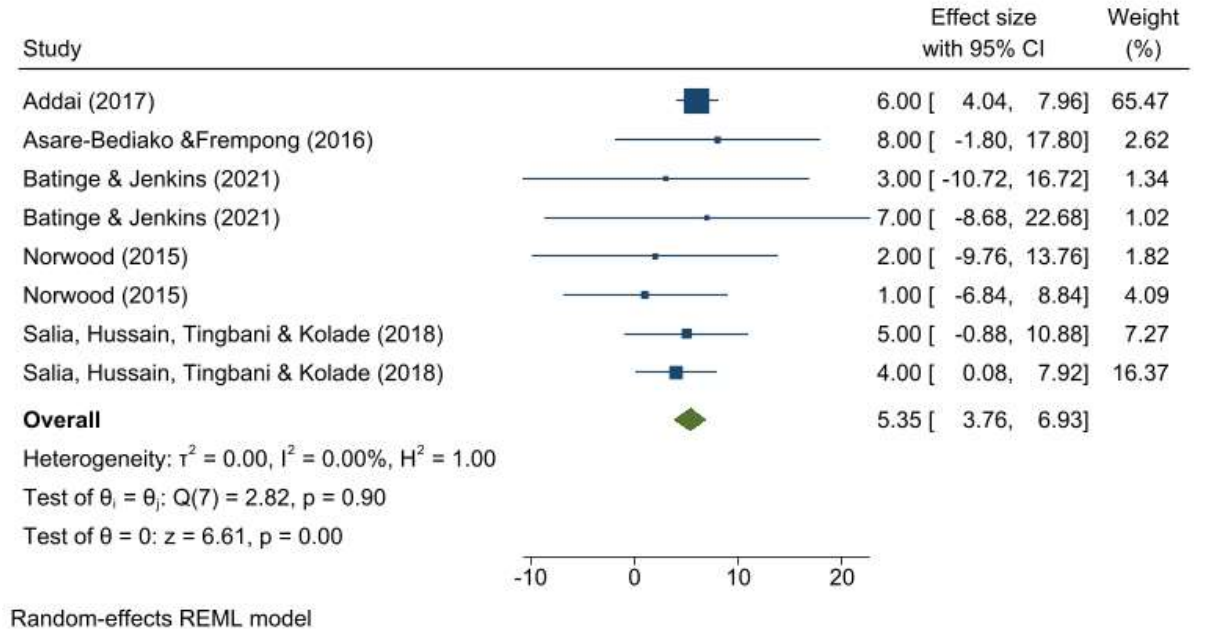


Notes: the dependent variable that have been selected for this analysis are domestic violence, education, disapproval of violence, family planning, number of children.

The third subgroup (figure 11) includes the studies with dependent variables that describe women’s assessment of their status within the household, family and community. The effect size, in this case, is bigger, meaning that microcredit has a bigger impact on aspects that include social empowerment and autonomy. This is possible because, having access to credit women can gain a new degree of independence that was not guaranteed without an income. As I explain in the framework, one-way microcredit can empower women, is by providing them increased autonomy and independence from their household head (husband or father). Therefore, the fact that the effect size is bigger in this subgroup is consistent with my hypothesis and theoretical

framework. One of the main drivers of the effect size is Addai (2017) which studies the effect on social empowerment. He measures social empowerment as the freedom of movement, and participation in domestic decision making and he argues that financial inclusion can increase the bargaining power within the household and the self-confidence of women (Addai, 2017). The other papers have less impact in calculating the average effect size, and this could be because they are more imprecise (high confidence intervals).

Figure 11: Forest plot of the perception pathway dependent variables



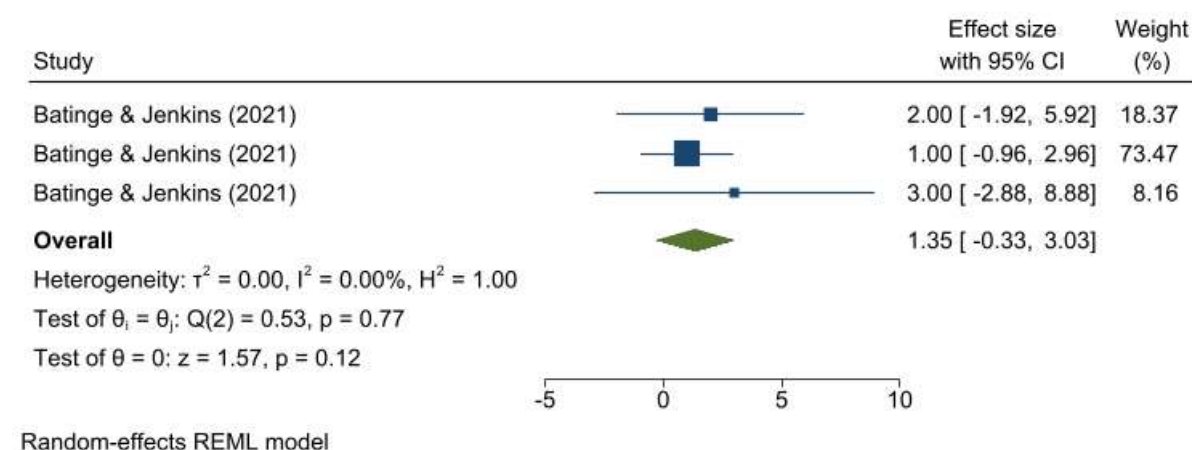
Notes: the dependent variables that have been selected for this analysis are social empowerment, female autonomy, health, standard of living, family cohesion.

7.1.1.2 Regions

To understand how microcredit affects women’s empowerment more in depth, I divided the sample of the papers into the different regions in which the studies were held and run different meta-regressions.

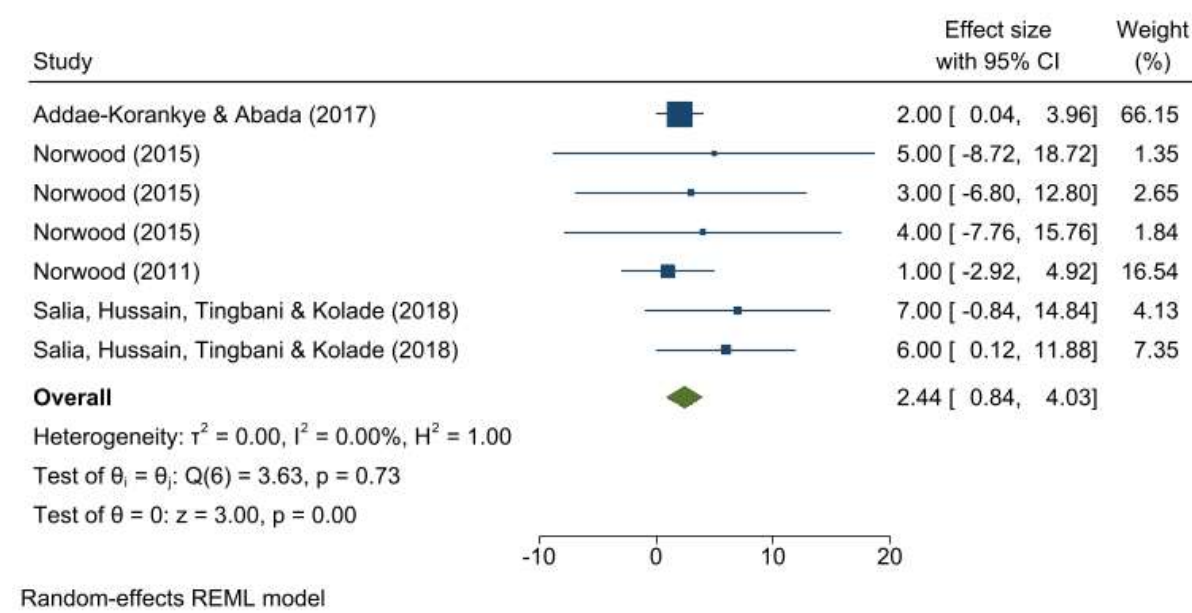
At first glance, the effect size of the different regions is smaller and they show little degree of heterogeneity. Figure 12 shows the results for the Bono-East region. The effect size is small and statistically insignificant, indicating that is not possible to determine a relationship between microcredit and women’s empowerment. It is possible that the relationship is not significant because of the lack of heterogeneity, since the results come from the same study.

Figure 12: Forest-plot of the studies of the Bono East Region



The studies that were conducted in the Greater Accra region show a higher, positive effect size (2.44) and statistically significant (figure 13). The effect size is the highest between the different region subgroups, however, it is not as high as in the main analysis. The reason for the small effect size could be that in the Greater Accra Region patriarchal structure has given less constraints on women, since it is one of the richest and most populated regions. In fact, women have higher education and are more employed in the formal sector in the Accra Region, compared to the rest of the regions (Amu, 2005). One-third of household in Accra are female-headed, indicating that women have an important role within the family as breadwinners (Amu, 2005) Moreover, no studies report that there are strong patriarchal norms in the region. Consequently, women do not need microcredit to gain empowerment.

Figure 13: Forest-plot of the studies of the Great Accra Region



The results of Figures 14, 15 and 16 are not statistically significant. Figure 14 shows the results for the Upper West Region, which is one of the poorest regions of Ghana. Access to credit could have had a positive effect on the population of the region. However, it seems that it is not possible to determine a relationship between the variables with the data available. The data of figures 15 and 16 come, respectively, from the same study, so it is possible that the homogeneity of the data limits the possibility to define the relationship between empowerment and microcredit.

Figure 14: Forest plot of the studies of the Upper West Region

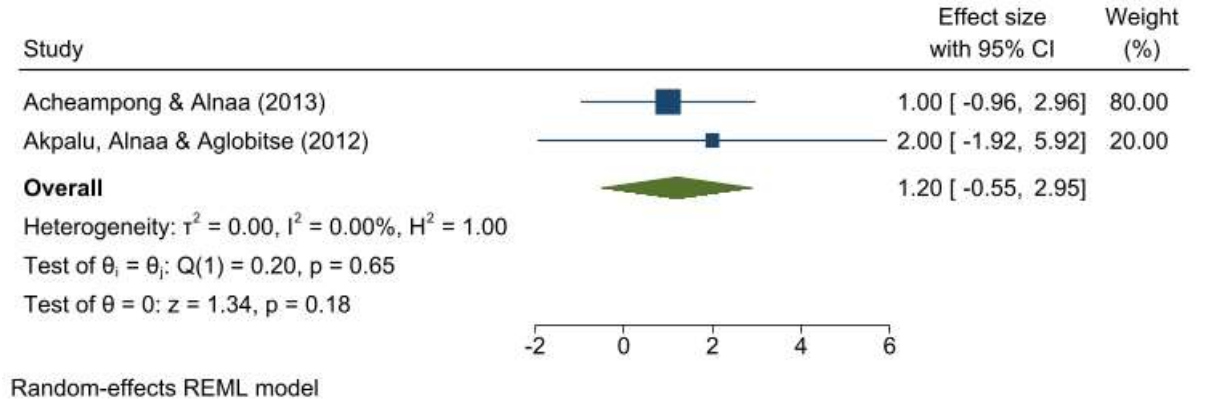


Figure 15: Forest plot of the studies that include different regions

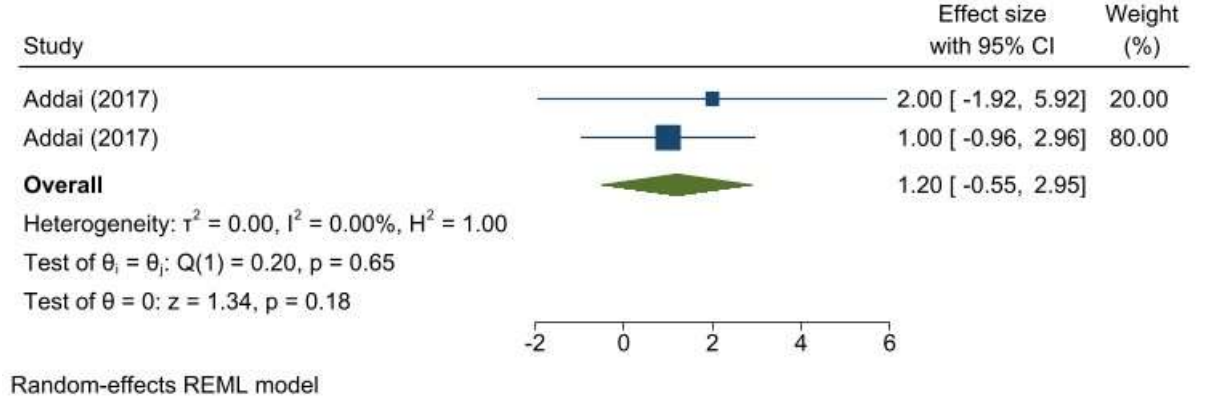
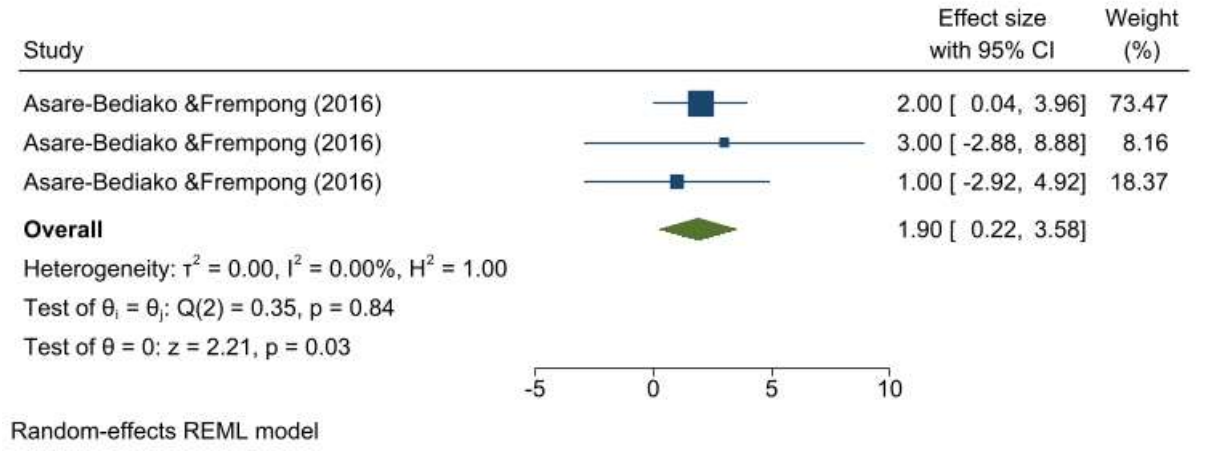


Figure 16: Forest-plot of the studies of the Western Region



7.1.1.3 Microfinance types

The following results show how different kinds of services affect women's empowerment. First, I analysed the effect of loans on women's empowerment. The forest-plot (figure 17) shows the results for the effect size of loans on women's empowerment has positive and statistically significant effect. However, the heterogeneity test still shows that the studies are homogenous. The results for this analysis seem to be driven by the study of Addae-Korankye & Abada (2017) which has an effect size of 5 and most of the weight (65.47%), among all the studies. As mentioned before, the reason for which loans have a great positive effect on women's empowerment is that, differently from other services like savings or insurance, they give direct access to money for women. Therefore, women can start gaining more confidence and independence from their husbands.

Figure 17: Forest-plot of the studies that analyze loans as independent variable

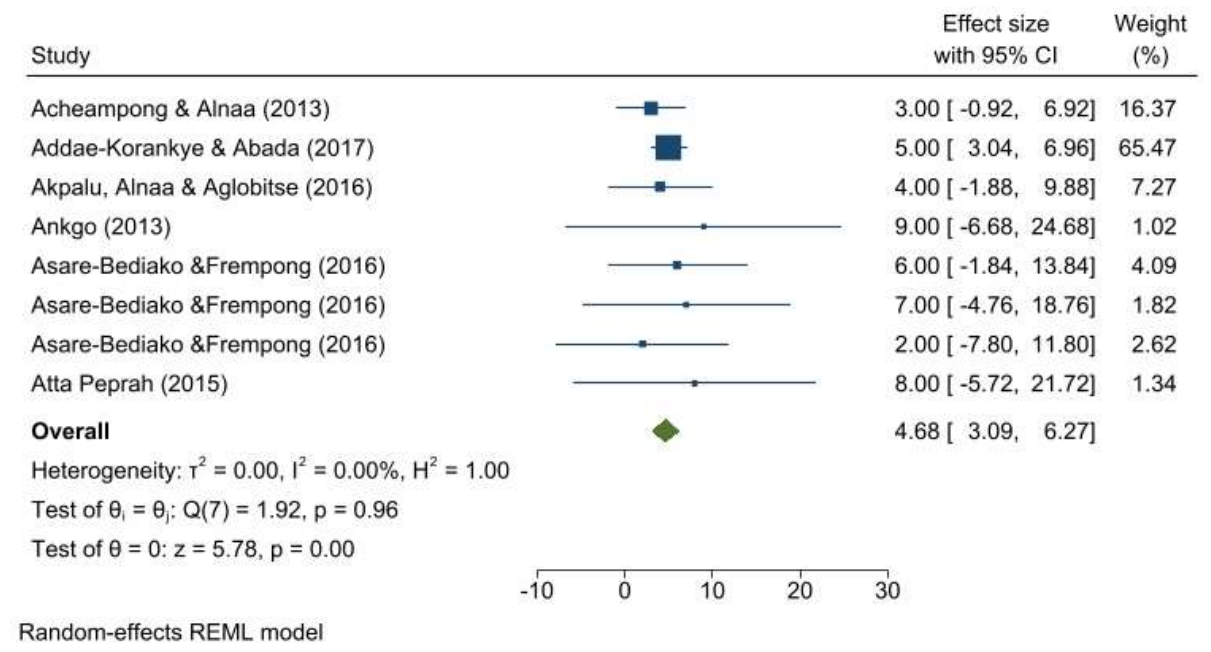
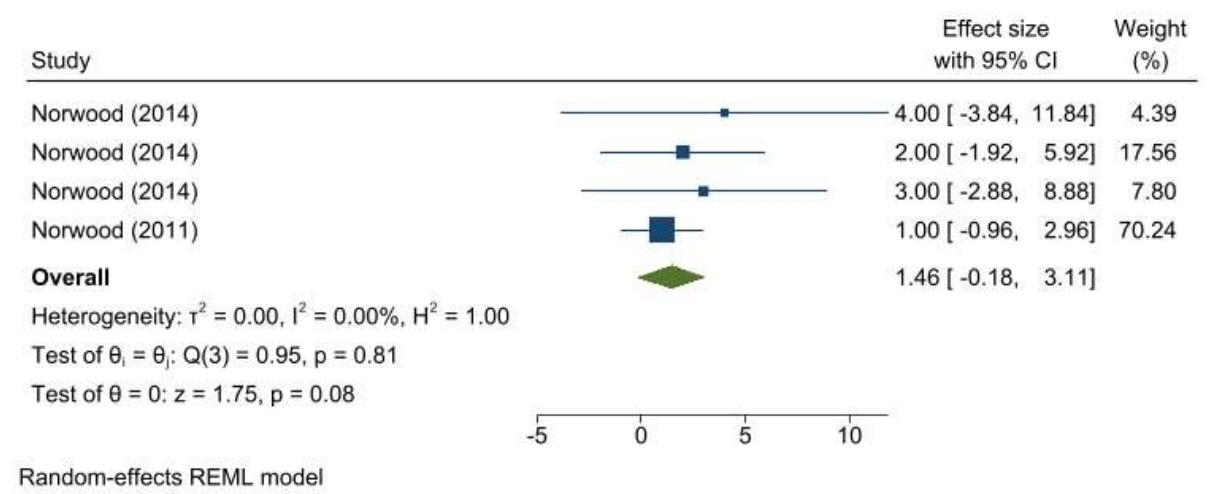


Figure 18 shows the results of the paper that studies susu, the Ghanaian form of group lending. The effect size is positive but smaller than the one for loans. However, the results are not statistically significant at the 95% level, so it is not possible to conclude that there is a relationship. A reasonable reason to explain the fact that the relationship is not significant is that there is a high level of heterogeneity, since both papers are done by the same author, and the availability of studies is limited.

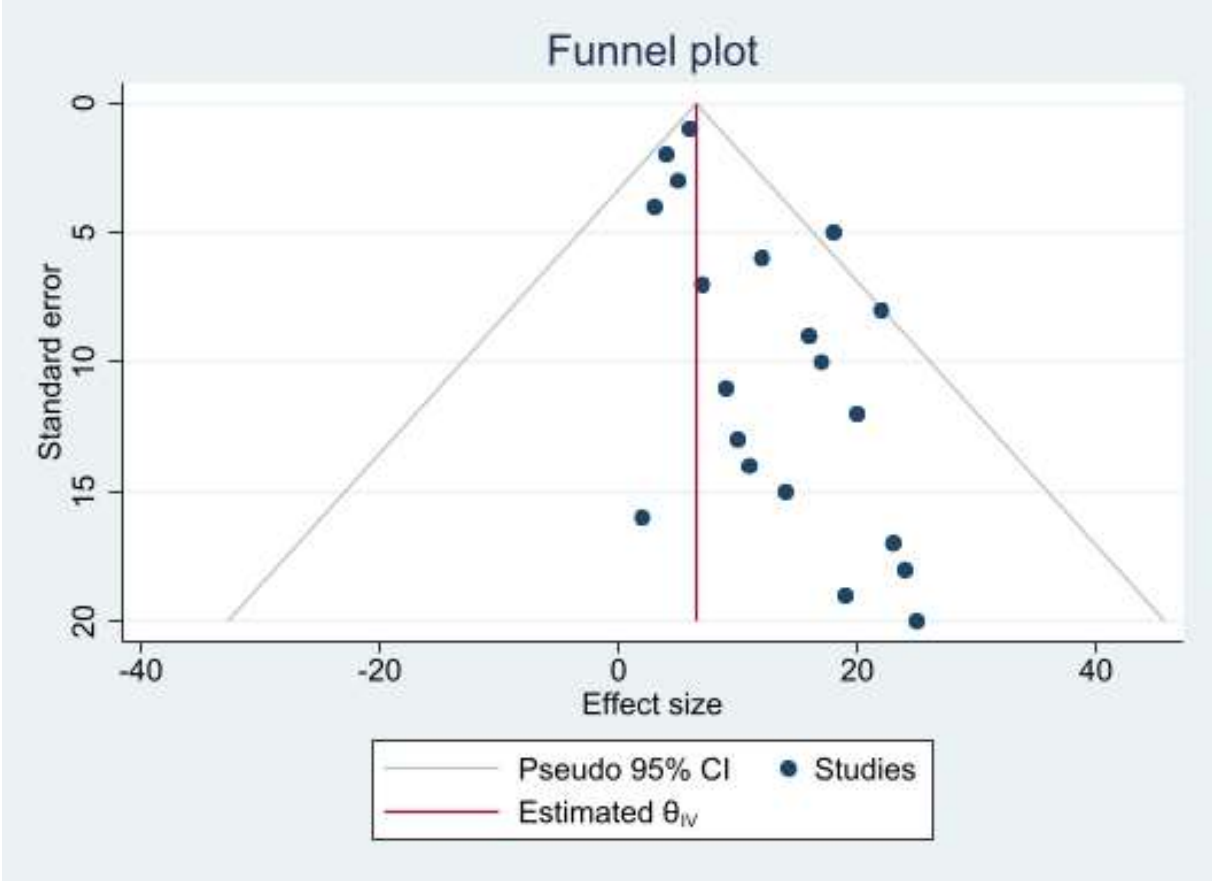
Figure 18: Forest-plot of the studies that analyze susu as independent variable



7.1.2 Tests for bias

The funnel plot (figure 19) is a graph that helps understand the relationship between study size and effect size. If there is no publication bias, the studies will be distributed symmetrically around the mean of the effect size (the middle of the plot), and located mostly at the top of the plot (Borenstein et al, 2021). Figure 19 shows that there is no publication bias since the studies are distributed within the confidence interval and mostly towards the top of the graph.

Figure 19: Funnel plot



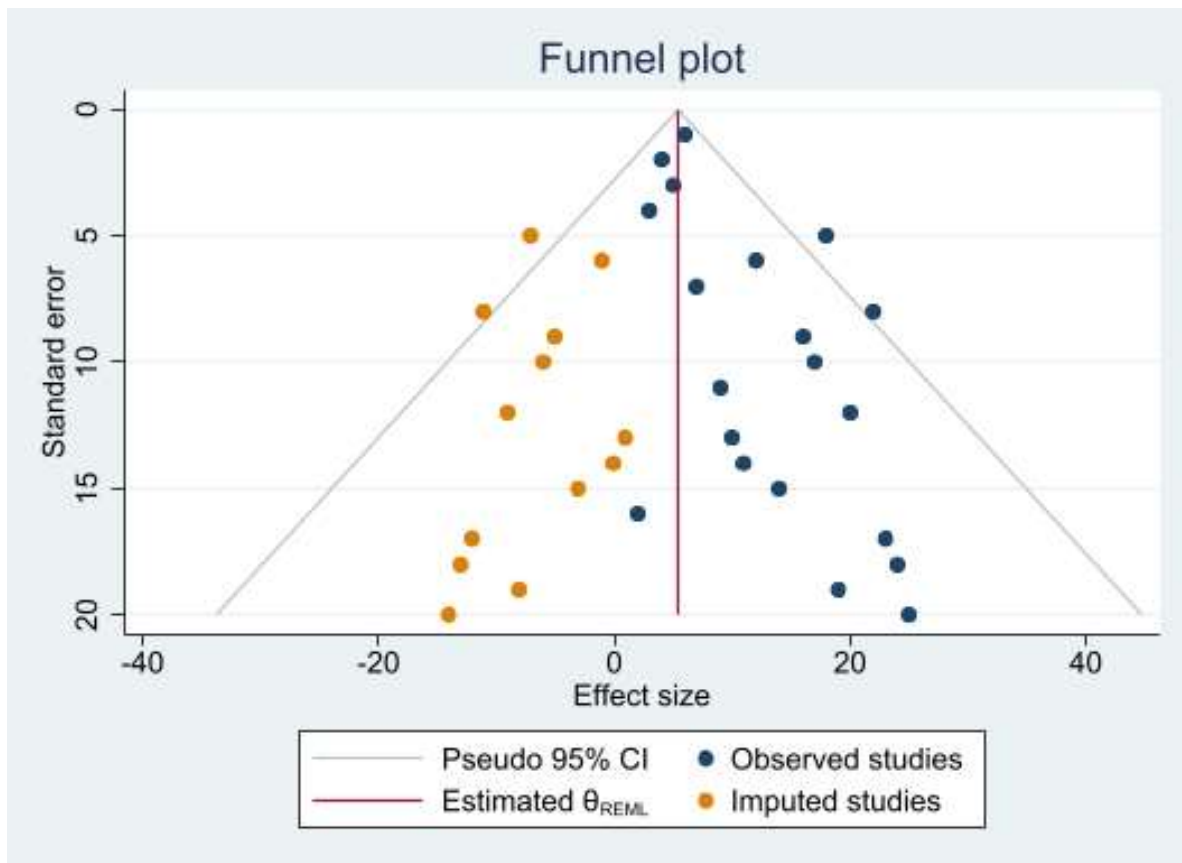
To test the funnel plot asymmetry, I have used the Egger et al. (1997) test for small study effect. The test shows that there is evidence for small study effect, because it is possible to reject the null hypothesis (no small study effect). For this reason, I have decided to perform the non-parametric trim and fill analysis to account for publication bias in the analysis. The method estimates the number of studies missing from the analysis, and calculates the effect -size.

Table 3: Regression-based Egger test for small-study effect

Regression-based Egger test for small-study effect			
Method: REML			
H0: $b_1=0$; no small study effect			
Beta 1	SE of Beta 1	z	P > z
0.88	0.306	2.88	0.0039
Non-parametric trim-and-fill analysis of publication bias			
Studies	Effect size	95% confidence interval	
Observed	6.464	4.913	8.016
Observed + Imputed	5.472	3.984	6.959

The results (table 3) of the non-parametric test show that the effect size that includes imputed studies, is smaller than the one computed for the observed studies. The reason is that, as it is visible in the figure below (figure 20), the missing papers fall in the left side of the funnel plot where the effect size is smaller. Therefore, the missing paper may bias the effect size upward.

Figure 20: Funnel plot with imputed studies



7.2 Qualitative studies:

In this section, I will discuss the different outcomes of the qualitative studies on microfinance and women's empowerment in Ghana. But first, I present some of the summary information of the paper I have gathered.

Overall, it is possible to suppose that the outcomes depend on contextual factors, such as cultural, social, economic background (Afriyie et al, 2020). For example, Alhassan (2011) finds that in context in which patriarchal structures are stronger, like in the Northern Region, the decision-making is more limited (Al-hassan, 2011; Owusu et al., 2013).

7.2.1 Material Pathway

Positive economic outcomes are generally found in quantitative works. Some of the examples of quantitative studies that analyse microcredit and their economic effects have been discussed

in the literature review and used in the meta-regression. However, in this section, I only analyse papers that use qualitative methods and that have registered positive economic outcomes in the beneficiaries of microfinance services.

One of the most common outcomes is the increase in income. Participating to microfinance programmes, increase women's income availability (Al-hassan & Bambangi, 2006; Butler et al, 2012; Mohammed et al, 2022). More specifically, Mohammed et al (2022) find that women that participated to microfinance programs had higher incomes compared to non-beneficiaries. The positive outcomes were also possible because the programme offered training in the region (Mohammed et al, 2022). This way, women could improve their skills and the quality of their products (Mohammed et al, 2022).

Women that have access to microcredit invest more than women that do not (Mohammed et al, 2022). Another determinant of positive outcomes that is commonly found, is how women decide to invest in microcredit lending determines their economic success. Most of the papers find that women often decide to expand their existing business or set up a new one (Affum, 2020; Afriyie et al, 2020; Ganle et al, 2015). However, it is more common that women that were already engaged in some economic activities are more successful (Afriyie et al, 2020; Butler et al, 2012; Ganle et al, 2015).

Moreover, when women use credit to invest in businesses, they are often able to increase their savings (Al-hassan & Bambangi, 2006; Amankwa et al, 2021; Mohammed et al, 2022). A susu beneficiary reported that:

“Before I joined I was not doing any work, but gradually began to collect and save my [eSusu] money. I bought flour and started frying donuts. And now I can spend, and use the proceed to buy food and make a nice home”.
(Norwood, 2005, p.5)

Studies have found that there is a statistical difference between participant savings and non-beneficiaries (Mohammed et al, 2022). The beneficiaries that were able to save some money, started planning ways to invest their money further, for example in building houses, paying school fees for their children, expansion of their businesses (Al-hassan & Bambangi, 2006). Moreover, women found that having the availability of savings made them more protected from shock (like changes in prices, emergencies, etc.) (Tetteh et al, 2014). Moreover, women were able to hire more workers and buy more stocks (Effa & Herring, 2005; Norwood, 2005). One of the beneficiaries stated:

“The eSusu helps me progress, I am able to use part of the money to hire labor on the farm and also use part of it to do my trading.” (Norwood, 2005, p. 5)

7.2.2 Relational Pathway

The fact that they can decide how to invest their own money is very important in order to reach empowerment (Ganle et al, 2015). In fact, if there are strong patriarchal norms, women are not able to fully decide for themselves. So, a great indicator of reaching empowerment is the control over loan use (ibidem).

Microcredit is more effective when the decision to participate in the programme comes from the beneficiaries (Afriyie et al, 2020). When women get access to credit, they can contribute to the household income and can gain some autonomy in spending and investing money (Alhassan & Bambngi, 2006). However, it can be less successful when the men’s domination is stronger (Afriyie et al, 2020; Boateng & Poku, 2019). In those cases, men often take over the control of the money of the loan and make decisions on how to spend them. For example, a borrower in Tamale reported that:

“One of the things that negatively affected my loan investment was my husband. You know he was the one who asked me to join and to take the loan. So, when I got the loan, he asked me to give part to him to repair his bicycle and pay other debts. I couldn’t say no...because he is the head of the house and I had no option. Because of this, it is hard for me to make good profit and pay the interest since the amount left was very small”. (Afriye et al, 2020, p. 237)

In different studies (Ganle et al, 2015), it has been found that women did not have control over the loan, and they often find a reason in socio and cultural norms. Afriye et al (2020) report that in regions with stronger patriarchal structures, like the Northern Region or the Volta Region, men view their wives and daughters as their property, and for this reason, they feel authorized to manage the loan (see also Alhassan, 2011). There are also some situations in which women decide to hand over the money of the loan to their husbands because generally, men’s activities are more profitable, thus economically more efficient for the household's wellbeing (Afriyie et al, 2020).

Another very important aspect is that women, to be empowered, need to be free from domination and abuse (Ganle et al, 2015). However, it is not uncommon that domestic abuse

and violence are outcomes of women participating in microfinance (Ganle et al., 2015; Salia et al, 2017). The violence is the consequence of the fact that men feel threatened by the increased autonomy of women (Salia et al, 2017). It happens because men see women as their property (Afriye et al, 2020), so if they feel that they are losing control over them, it can escalate in domestic violence (Amhed, 2008). Based on feminist theory, those dynamics happen because of the gender role and the structures that limit women's autonomy.

Likewise, joint-liability of group lending in some case have caused different forms of violence. Some of the beneficiaries lamented that, when they were part of loan groups, sometimes they were victims of moral coercion or verbal aggression (Ganle et al, 2015). Others pointed out that some of the peers confiscated their personal assets (Ganle et al, 2015). The reactions of the participants show clearly how when the expectations are not met, violence prevails on the group dynamics. As Lirap-Fonderson (2003) highlights, patriarchal societies promote coercion and put a lot of pressure on the beneficiaries of microfinance institutions.

Decision-making is a fundamental element that characterizes empowerment. As discussed earlier, access to credit is not always linked to autonomy. But in some cases, thanks to participation in microfinance programmes, women claimed that they have gained control over decisions and the credit (Kessey, 2005; Owusu et al, 2013).

When women can decide how to spend their money, they invest them in many ways. For example, As a consequence of higher incomes women often decide to invest in their children's education (Adu-Okoree ; Alhassan & Bambangi ,2006; Effa & Herring, 2005; Mohammed et al, 2022; Ziem & Der Bebelleh, 2014). Moreover, different studies have found that women use microfinance services also to pay medical bills (Affum, 2020) and that they could access health care facilities for their families (Al-hassan & Bambangi, 2006; Batinge, 2018; Mohammed et al, 2022). Another positive impact is that families can buy more quality food and can increase their consumption (Batinge, 2018; Butler et al, 2012), which also contributes to a better health.

7.2.3 Perceptual Pathway

Some women (Tamale Metropolitan area) find that their participation has improved their social status both in their household and in their community (Alhassan & Akudugu, 2012; Amankwa et al, 2021). They perceive that this change has been possible because of their ability to earn an income due to their newly gained access to credit. In fact, Amankwa et al (2021) highlight how

the self-esteem and self-confidence acquired thanks to the participation of women in economic activities have a fundamental role in their empowerment. A respondent of the study (Amankwa et al, 2021) reported that microcredit

“[...]has given them (the beneficiaries) recognition and boosted their confidence and self-esteem to take up initiatives and assume societal positions” (Amankwa et al, 2021, p. 265).

Moreover, women in the Tamale Metropolitan area, find that the group they have been part of because of the lending has also become a safety net (Alhassan & Akudugu, 2012). All of these elements have contributed to a change in power relations due to their increased bargaining power within the household (Alhassan & Akudugu, 2012; Ganle et al, 2015; Kessey, 2005).

Additionally, Butler et al (2012) find that women that have support from their families have a higher chance to be successful. This shows how important patriarchal norms are in affecting the outcomes of the programs. So, when women are encouraged to be independent economically, they have also better results.

7.2.4 Other

Afriye et al (2020) find that assessing business literacy could improve the success rates of microcredit programmes. This is because evaluating the capacity and the knowledge of the beneficiaries may help the operators to prepare courses to make the management of the microfinance services more profitable. Alhassan (2011) finds that, in some cases, when there are training programmes, only a small sample of the clients can benefit from it. Organizations expect that the trained beneficiaries will help other members. However, the outcomes are not always positive, since most of the women using microcredit are illiterate (Alhassan, 2011) so they find it more difficult to teach what they learned to each other.

Batinge (2018) finds that daughters drop-out from school to help their mothers to repay their loans. The data shows that a very concerning percentage (79.6% of the respondent of the study) of women confirmed the reason to stop going to school. The same study shows that sons do not drop- out of school for this reason. This is an example of how patriarchal norms discriminate against daughters. The decision to drop-out of school will have important consequences for the girls since they will gain the same skills that boys of the same age can acquire at school. Hence, they will have more difficulties finding well-paid jobs.

7.2.5 Challenges

Between all these outcomes, beneficiaries have also listed some challenges or obstacles that they have encountered during the years of the loan. As aforementioned, women generally have no collaterals, and for this reason, have more difficulties having access to credit. Another obstacle that women have found when requesting a loan, is that they are required for savings as a condition (Ntim, 2018). For this reason, Affum (2020) finds that women were not satisfied by some of the processes to obtain a loan because in some cases it was required to have collateral (see also Boateng & Poku, 2019; Effa & Herring, 2005; Ntim, 2018). Relatedly, women who participated in group lending, have argued that their success was limited by the social collateral aspect of this approach (Afriye et al., 2020). Afriye et al (2020) believe that this could be caused by information asymmetry between group members or where social relations are not very tight.

Additionally, women who use microcredit to establish their own businesses, often face constraints related to market demand that could be caused by higher competition or no or little demand for their product (Alhassan et al, 2016; Boateng & Poku). Similarly, women highlighted how they struggled to find activities that were profitable or that could meet the market demand (Afriye et al, 2020; Boateng & Poku, 2019). Another obstacle that women encounter is that there are government regulations that impede the development of their businesses (Boateng & Poku, 2019).

Another issue discussed in different studies is that sometimes there are very high interest rates (Alhassan, 2011; Alhassan & Bambangi, 2006; Alhassan et al, 2016 Effa & Herring, 2005; Kusi et al, 2019; Ntim, 2018). High loan prices can affect profit but also the chance to repay it (Alhassan, 2011). So, differently from what is generally found, for example, in Bangladesh with

the Grameen Bank that is a repayment rate of 96%, women in Ghana have more difficulties¹¹ to repay their loans (Amankwa et al, 2021).

7.3 *Findings and discussion*

The results of the analysis of the quantitative papers point to a positive relationship between microfinance and women empowerment, as hypothesized. This relationship keeps the same size but it changes its magnitude when I control for the different dependent variables, regions and the type of microcredit analyzed. Thus, the results show consistent and robust findings, namely a positive impact of microcredit on women's empowerment. This means that when women participate in these kinds of programs they enhance their economic independence, their autonomy, and their role in the community, which is confirmed by the results of the first subgroup analysis.

When analyzing the material pathway variables, the effect size is positive, indicating that microcredit increase incomes, savings, assets when women participate. This is also confirmed by different studies (Al-hassan & Bambangi, 2006; Butler et al, 2012; Mohammed et al, 2022). Positive economic outcomes are very common in the literature, and specifically they are often registered in Ghana. As many feminist authors argue, microcredit can be a tool that can lead to economic autonomy (Drolet, 2002), and as a consequence, it can lead to an increase in the availability of economic resources for women. As discussed by Lirap-Fonderson (2002), when women can use microcredit to gain independence from their husband or the head of their household, they can be empowered. This is confirmed by the results of the analysis of the relational pathway variables (figure 10) and the qualitative studies. In fact, the increase in decision-making is one of the outcomes that have been found when interviewing women that

¹¹ Alhassan & Bambangi (2006) find that the rate of repayment is around 71% in Ghana.

participate in microfinance programs. However, the effect size results of the meta-regression is rather small, and this could be explained by the fact that women sometimes report episodes of violence of different kinds (Ganle et al, 2015; Salia et al, 2017). As feminist theorists predict, when men lose control over their wives they can become violent against them (Ganle et al, 2015; Salia et al, 2017). Or in a situation of joint-liability, which is the case of group lending, women often feel pressure, are subject to moral coercion or get sequestered from their properties (Ganle et al, 2015). The analysis of the perceptual pathway variables also shows a positive and greater effect size compared to the two previous ones. Since empowerment is a process in which people should feel empowered on different levels (Stromquist, 1995) including the psychological, political and economic. Hence, the perception that women have of themselves is very important to empower them. For this reason, the effect size of microcredit is bigger in this subgroup analysis.

The regional analysis shows robust results, but the results are statistically significant only for the Greater Accra Region, which is the region of the capital. The fact that the effect size is positive confirms that microfinance has a positive effect on women's empowerment. More specifically, in the Greater Accra Region, none of the studies reports patriarchal norms that may affect the positive results of the programs. The effect size of microcredit in the region is relatively small, and this is because microcredit may be less efficient than others to promote empowerment. The feminist theory predicts that women are empowered when they can increase their autonomy and gain freedom from the control of men. In the case of the Greater Accra region, women are less constrained by patriarchal structures, compared to the other regions, so the effect is smaller but still positive.

Finally, loans have a positive relationship with women's empowerment in Ghana. As aforementioned, the importance of microfinance as a tool of empowerment stems from the fact that women are often discriminated against for traditional forms of finance. Most of the time, women lack access to credit and they lack the economic availability to start their own business or simply to decide independently how to spend the money. Therefore, microloans give them the possibility to gain economic autonomy and then empowerment. Thus, the results of figure 15 confirm the hypothesis and the conceptual framework, discussed above.

8 Conclusions

The role of microcredit in empowering women has gained importance in the past few decades, after the success of Yunus's Grameen Bank. Different studies have found a positive relationship between microfinance and women's empowerment in Ghana. However, there has been some studies that showed that in certain environment in Ghana, the outcomes are not positive. For this reason, I employed the meta-regression to analyze and summarize the effect size of the relationship. Additionally, this thesis uses a thematic review approach to discuss the main outcomes of the qualitative studies that have analyzed the relationship between microfinance and empowerment.

Using these two different methodologies, results show that the relationship positive between microcredit and women's empowerment, as hypothesized. The results are consistent when controlling for subgroups, including the different aspects of the definition of women's empowerment, the different regions that were analyzed by the papers and the different services that microfinance institutions use. As feminist authors theorized, women are truly empowered when they have more economic independence, but mostly, when they are autonomous in their decision and they perceive that their role has changed within their society and this is what the results show. In fact, the relationship is positive and statistically significant for each of the aspects of the empowerment matrices (Ganle et al, 2015). Thus, I find evidence for the hypothesis, as the results a positive impact of microcredit on women's empowerment. My results are in line with what it has been found by the literature (Acheapong & Alnaa, 2013, Addae-Korankye & Abada, 2017; Addai, 2017; Akpalu et al, 2012; Angko, 2013; Asare-Bediako & Frempong, 2016; Azanlerigu & Kuntulo, 2015; Batinge & Jenkins, 2021; Norwood, 2014).

The results point in at promising direction for policy makers, as microfinance seems to have a good effect on women's well-being. It increases incomes, savings and consumption while also improving women's decision-making and their authority in the community. However, it is crucial not to underestimate all the challenges that women reported, including the risks of domestic violence or moral coercion. Therefore, I would recommend the promotion of the programs, while taking into account the environment in which they are implemented. It is very

important that culture and norms are understood before implementing a programme that could eventually lead to harm to the beneficiaries.

Further research could analyze the effect of different explanatory variables within the relationship between microfinance and women's empowerment. Another aspect that should be studied is how culture and norms affect the relationship. It would be very interesting to study whether it is systematic, as the feminist theory affirms, that patriarchal norms affect the outcomes of such programs. Finally, it would be very interesting to study women's agency and the role of microcredit from a historical perspective. Microcredit has a long history in Ghana, and women's empowerment is understudied in a long-term perspective.

References

- Abraham, A. Y., Ohemeng, F. N. A., & Ohemeng, W. (2017). Female labour force participation: Evidence from Ghana. *International Journal of Social Economics*, 44(11), 1489-1505.
- Abera, N., & Asfaw, M. (2019). Impact of Microfinance on Rural Household Poverty in Ethiopia: A Review. *Journal of Ecology & Natural Resources*, 3(5), 2578-4994.
- Acheampong, I. K., & Alnaa, S. E. (2013). Impact of microcredit on poverty reduction among rural women in Ghana: The case of Upper East Region: Impact of microcredit on poverty reduction among rural women in Ghana: The case of Upper East Region. *Oguua Journal of Social Sciences*, 7(1), 136-153.
- Adam, B. Y., & Brigandi, A. M. (2017). Effects of Micro Credit on the Income of Women in the Gushegu District of the Northern Region. *ADRRRI Journal (Multidisciplinary)*, 26(3), 17-28.
- Adams, S., & Bartholomew, T. A. (2010). The impact of microfinance on maize farmers in Nkoranza (Brong Ahafo Region of Ghana). *Journal of Management Research*, 2(2), 1.
- Addae-Korankye, A. (2020). Historical emergence of microfinance and the microfinance sector in Ghana. *Business Management Dynamics*, 10(2), 1.
- Addae-Korankye, A. ., & Abada, A. . (2016). Microfinance and Women Empowerment in Madina in Accra, Ghana. *Asian Economic and Financial Review*, 7(3), 222–231. <https://doi.org/10.18488/journal.aefr/2017.7.3/102.3.222.231>
- Addai, B. (2017). Women empowerment through microfinance: Empirical evidence from Ghana. *Journal of finance and accounting*, 5(1), 1-11.
- Affum, F. (2020) A Study of Microfinance and Its Impact on the Livelihoods of Market Women; Evidence from Yilo Krobo Municipality, Ghana. *European Scientific Journal*. 6(16), pp.216-229

- Afriyie, K., Ganle, J. K., Segbefia, A. Y., Kamau, P., & Wamue-Ngare, G. (2020). Contextual Factors Which Affect the Success of Microcredit Programs Among Women. *Journal of Developing Societies*, 36(2), 229-254.
- Affum, F. (2020) A Study of Microfinance and Its Impact on the Livelihoods of Market Women; Evidence from Yilo Krobo Municipality, Ghana. *European Scientific Journal*. 6(16), pp.216-229
- Akpalu, W., Alnaa, S. E., & Aglobitse, P. B. (2012). Access to microfinance and intra household business decision making: Implication for efficiency of female owned enterprises in Ghana. *The Journal of Socio-Economics*, 41(5), 513-518.
- Akudugu, M. A., Egyir, I. S., & Mensah-Bonsu, A. (2009). Women farmers' access to credit from rural banks in Ghana. *Agricultural Finance Review*.
- Al-Amin, M., Hossain, M. I. & Mathbor, G. M. (2013). Women Empowerment through Microcredit: Rhetoric or Reality? An evidence from Bangladesh. *Multidisciplinary Journal of Gender Studies*, 2(2), 107-126.
- Al-hassan, S. (2011). Is Microcredit a Viable Strategy for Empowering Women?. *Ghana Journal of Development Studies*, 8(1), 72-89.
- Al-Hassan, S., Abdul-Malik, A., & Andani, A. (2011). The role of Grameen Ghana in improving income of women shea butter processors.
- Alhassan, A. R., & Akudugu, M. A. (2012). Impact of microcredit on income generation capacity of women in the Tamale Metropolitan area of Ghana. *Journal of Economics and Sustainable Development*, 3(5), 41-48.
- Alhassan, E. A., Hoedoafia, M. A., & Braimah, I. (2016). The effects of microcredit on profitability and the challenges of women owned SMEs: Evidence from Northern Ghana. *Journal of Entrepreneurship and Business Innovation*, 3(1).
- Alnaa, S. E. (2017). Microcredit to rural women, intra-household power play and employment creation in Northern Ghana. *Journal of Interdisciplinary Economics*, 29(2), 197-213.

- Al-Shami, S. S. A., Razali, R. M., & Rashid, N. (2018). The effect of microcredit on women empowerment in welfare and decisions making in Malaysia. *Social Indicators Research*, 137, 1073-1090.
- Amankwa, M. O., Bawole, J. N., Mensah, J. K., & Mohale, T. G. (2021). The Politics of Microcredit Facilities as Pro-poor Intervention in Solving Gender Inequality in Ghana: the Political Settlement Perspective. *Global Social Welfare*, 8, 287-299.
- Amoako, C., & Awuah, A. D. (2014). Impact assessment of microcredit on the well-being of women in Ghana. *International Journal of Economics, Commerce and Management*, 2(12).
- Amu, N. J. (2005). *The role of women in Ghana's economy*. Accra: Friedrich Ebert Foundation.
- Angko, W. (2013). Microfinance and poverty reduction nexus among rural women in selected districts in the Upper west region of Ghana. *Developing Country Studies*, 3(9), 128-141.
- Anyidoho, N. A., & Manuh, T. (2010). Discourses on women's empowerment in Ghana. *Development*, 53(2), 267-273.
- Asamoah, M., Darkwah, A., & Amoah, F. M. (2015). Microcredit Schemes: A Tool for Promoting Rural Savings Capacity among Poor Farm Families: A Case Study in the Eastern Region of Ghana. *Open Journal of Social Sciences*, 3(01), 24.
- Armendáriz, B., & Morduch, J. (2010). *The economics of microfinance*. MIT press.
- Aronson, J. (1995). A pragmatic view of thematic analysis. *The qualitative report*, 2(1), 1-3.
- Asare-Bediako, M., & Frempong, M. (2016). The impact of microfinance in rural households in the Western Region of Ghana. *American Scientific Research Journal of Engineering, Technology, and Sciences*, 20(1), 9-20.
- Aterido, R., Beck, T., & Iacovone, L. (2013). Access to finance in Sub-Saharan Africa: is there a gender gap?. *World development*, 47, 102-120.

- Azanlerigu, J. A., & Kuntulo, A. D. (2015). Assessing the impact of micro-finance in reducing poverty among women in the Bolgatanga municipality in Ghana: A case study of Sinapi Aba Trust. *Research Journal of Finance and Accounting*, 6(22), 80-93.
- Banerjee, A., Duflo, E., Glennerster, R. & Kinnan, C. (2015). The Miracle of Microfinance? Evidence from a Randomized Evaluation, *American Economic Journal: Applied Economics*, vol. 7, no. 1, pp.22–53.
- Bank of Ghana (2004). Notice to Banks, Non-Bank Financial Institutions and the General Public Notice No. BG/GOV/SEC/2011/04 Operating Rules and Guidelines for Microfinance Institutions
- Bank of Ghana (2007). A Note on Microfinance in Ghana. Bank of Ghana Working Papers. Retrieved April 16, 2023, from <https://www.bog.gov.gh/wp-content/uploads/2019/07/Microfinancing1.pdf>
- Batinge, B. K. (2018). Women access to microfinance loans on children formal education: A case of rural northern migrant in the Brong Ahafo region of Ghana. *Journal of Business & Financial Affairs*, 7(3), 1-9.
- Batinge, B. K., & Jenkins, H. (2021). Gender and poverty reduction in Ghana: the role of microfinance institutions. *International Journal of Economics and Finance*, 13(8), 1-71.
- Batliwala Srilatha. Meaning of Women's Empowerment: New Concepts from Action. In: Sen Gita, Germain Adrienne, Chen Lincoln C., editors. *Population Policy Reconsidered: Health, Empowerment, and Rights*. Cambridge, Mass: Harvard Center for Population and Development Studies; 1994. pp. 127–138.
- Becchetti, L., and P. Conzo. 2013. “Credit Access and Life Satisfaction: Evaluating the Nonmonetary Effects of Micro Finance.” *Applied Economics* 459: 1201–1217. doi:10.1080/00036846.2011.624086.
- Bel hadj Miled, K., & Ben Rejeb, J. E. (2018). Can microfinance help to reduce poverty? A review of evidence for developing countries. *Journal of the Knowledge Economy*, 9, 613-635.

- Boateng, S., & Poku, K. O. (2019). Accessing finance among women-owned small businesses: evidence from lower Manya Krobo municipality, Ghana. *Journal of Global Entrepreneurship Research*, 9, 1-17.
- Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. R. (2021). *Introduction to meta-analysis*. John Wiley & Sons.
- Boserup, E (1970). *Woman's Role in Economic Development*. London, George Allen & Unwin.
- Busingye, J., & Kazooba, C. T. (2018). Micro-credit and Women Empowerment: A Case of Female-Headed Households in Uganda. *International Journal of Sciences: Basic and Applied Research*, 37(3), 58-69.
- Butler, L. M., Kobati, G. Y., Anyidoho, N. A., Colecraft, E. K., Marquis, G. S., & Sakyi-Dawson, O. (2012). Microcredit–nutrition education link: A case study analysis of Ghanaian women's experiences in income generation and family care. *African Journal of Food, Agriculture, Nutrition and Development*, 12(1), 5709-5724.
- Chomen, D. A. (2021). The Role of Microfinance Institutions on Poverty Reduction in Ethiopia: The Case of Oromia Credit and Saving Share Company at Welmera District, *Future Business Journal*, vol. 7, no. 1, p.44.
- Chowdhury, M. J. A., Ghosh, D., & Wright, R. E. (2005). The impact of micro-credit on poverty: evidence from Bangladesh. *Progress in Development studies*, 5(4), 298-309.
- Cornwall, A. (2016). Women's empowerment: What works?. *Journal of International Development*, 28(3), 342-359.
- Deeks, J. J., Higgins, J. P., Altman, D. G., & Cochrane Statistical Methods Group. (2019). Analysing data and undertaking meta-analyses. *Cochrane handbook for systematic reviews of interventions*, 241-284.
- Drolet, J. (2010). Feminist perspectives in development: Implications for women and microcredit. *Affilia*, 25(3), 212-223.

- Duah, S., & Kyaruzi, I. S. (2009). Microcredit for Women Entrepreneurs in Ghana: The Case of Women Development Fund in the Accra Metropolis. *Female ENTREPRENEURSHIP and Local Economic Growth*, 219.
- Duflo, E. (2012). Women empowerment and economic development. *Journal of Economic literature*, 50(4), 1051-1079.
- Dulhunty, A. (2022) Examining microcredit self-help groups through the lens of feminist dignity, *Oxford Development Studies*, 50(4), 307-320, DOI: 10.1080/13600818.2022.2038118
- Duvendack, M., Palmer-Jones, R., Copestake, J. G., Hooper, L., Loke, Y., & Rao, N. (2011). What is the evidence of the impact of microfinance on the well-being of poor people?.
- Ebenezer, O-Y., Gideon, O-Y., & Uwineza, D. (2020). Microfinance and Women's empowerment in Ghana: Challenges and Prospects. *International Journal of Academic Research in Business and Social Sciences*. 10(10), 377-404.
- Effa, D. A., & Herring, D. R. (2005). Micro finance support to rural women farmers in Ghana: a case study of the Ga district of the greater Accra region, Ghana (Doctoral dissertation, University of Arkansas, Fayetteville).
- Egger, M., Davey-Smith, G. Schneider, M. and Minder C. (1997). Bias in Meta-Analysis Detected by a Simple, Graphical Test. *British Medical Journal* (Sept. 13) Vol. 315(7109): 629-634.
- Eriksen, S., & Lensink, R. (2015). Measuring the impact of an ongoing microcredit project: evidence from a study in Ghana. *Journal of Development Effectiveness*, 7(4), 519-529.
- Ganle, J. K., Afriyie, K., & Segbefia, A. Y. (2015). Microcredit: Empowerment and disempowerment of rural women in Ghana. *World development*, 66, 335-345.
- Geleta, E. B. (2016) Microfinance and women's empowerment: an ethnographic inquiry, *Development in Practice*, 26:1, 91-101, DOI: 10.1080/09614524.2016.1114071
- Government of Ghana (2006). Ghana Microfinance Policy (GHAMP).

- Hameed, W. U., Hussin, T., Azeem, M., Arif, M., & Basheer, M. F. (2017). Combination of microcredit and micro-training with mediating role of formal education: A micro-enterprise success formula. *Journal of Business and Social Review in Emerging Economies*, 3(2), 285-291
- Hermes, N. 2014. "Does Microfinance Affect Income Inequality?" *Applied Economics* 469: 1021–1034. doi:10.1080/00036846.2013.864039.
- Hudu, Z. (2009). *Socio-Economic Analysis Of Livelihood Strategies Of Rural Women Beneficiaries Of Microcredit In The Tolon/Kumbungu District Of The Northern Region Of Ghana* (Doctoral dissertation).
- Imai, K. S., Gaiha, R., Thapa, G., & Annim, S. K. (2012). Microfinance and poverty—a macro perspective. *World development*, 40(8), 1675-1689.
- International Labour Organization (n.d.). Education and Mismatch Indicators (EMI database). ILOSTAT. Retrieved May 22, 2023, from <https://ilostat.ilo.org/resources/concepts-and-definitions/description-education-and-mismatch-indicators/>
- Julius A. Nukpezah & Charles Blankson (2017) Microfinance Intervention in Poverty Reduction: A Study of Women Farmer-Entrepreneurs in Rural Ghana, *Journal of African Business*, 18:4, 457-475, DOI: 10.1080/15228916.2017.1336915
- Kabeer, N. (2001). Conflicts Over Credit: Re-Evaluating the Empowerment Potential of Loans to Women in Rural Bangladesh. *World Development*. 2001;29:63–84.
- Kabeer, N. (2005a). Gender equality and women's empowerment: A critical analysis of the third millennium development goal 1. *Gender & development*, 13(1), 13-24.
- Kabeer, N. (2005b). Is microfinance a 'magic bullet' for women's empowerment? Analysis of findings from South Asia. *Economic and Political weekly*, 4709-4718.
- Kessey, C. (2005). Empowering Muslim women through microcredit scheme: The case of the Sunyani Gonja Muslim women's group. *Working Papers on Ghana: Historical and Contemporary Studies*, 7, 1-52.

- Kusi, A., Yussif, S., & Ismail, A. (2019). Access to micro credit by women entrepreneurs in Ghana: Sinapi aba Trust-Kumasi in retrospect. *International Journal of Academic Research in Business and Social Sciences*, 9(9), 590-613.
- Lairap-Fonderson, J. (2003). The disciplinary power of micro credit: Examples from Kenya and Cameroon. In *Rethinking Empowerment* (pp. 182-198). Routledge.
- Lopatta, K., and M. Tchikov. 2015. "Do Microfinance Institutions Fulfil Their Promise? Evidence from Cross-Country Data." *Applied Economics* 48 (18): 1655–1677.
- Loubere, N. (2018). Indebted to development: microcredit as (de) marginalisation in rural China. *The Journal of Peasant Studies*, 45(3), 585-609.
- Luis Diaz-Serrano & Frank G. Sackey (2023) Is microfinance really helping the most vulnerable? An empirical test of the effectiveness of the Ghana's Microfinance Policy Reform, *Applied Economics*, 55:2, 131-145, DOI: 10.1080/00036846.2022.2071830
- Marquis, G. S., Colecraft, E. K., Sakyi-Dawson, O., Lartey, A., Ahunu, B. K., Birks, K. A., ... & Huff-Lonergan, E. (2015). An integrated microcredit, entrepreneurial training, and nutrition education intervention is associated with better growth among preschool-aged children in rural Ghana. *The Journal of nutrition*, 145(2), 335-343
- Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. Sage publications.
- Mensah, S. (2017). Banking and Capital Markets. *The Economy of Ghana Sixty Years After Independence*, 117.
- Minasyan, A., Zenker, J., Klasen, S., & Vollmer, S. (2019). Educational gender gaps and economic growth: a systematic review and meta-regression analysis. *World Development*, 127, 199–217.
- Moghadam, V. M. (1998). Feminisms and development. *Gender & History*, 10(3), 590-597.
- Mohammed, F., Boateng, S. D., & Freeman, C. (2022). Effect of Access to Microfinance Support on Growth of Women Agro-Processing Enterprises in the Northern Region of Ghana. *The International Journal of Business & Management*, 10(3).

- Mosedale, S. (2005). Assessing women's empowerment: towards a conceptual framework. *Journal of international development*, 17(2), 243-257.
- Ngo, T. M. P., & Wahhaj, Z. (2012). Microfinance and gender empowerment. *Journal of Development Economics*, 99(1), 1-12.
- Norwood, Carollette (2005). Macro Promises of Microcredit: A Case of a local eSusu in Rural Ghana. *Journal of International Women's Studies*, 7(1), 1-7. Available at: <https://vc.bridgew.edu/jiws/vol7/iss1/1>
- Norwood, C. (2011). Women, microcredit and family planning practices: A case study from rural Ghana. *Journal of Asian and African studies*, 46(2), 169-183.
- Norwood, C. (2014). Women's empowerment and microcredit: A case study from rural Ghana. *Journal of international studies and development*, 4, 1.
- Ntim, D. O. (2018). Microfinance and poverty reduction: Evidence from market women in the New Juaben Municipality, Ghana. *ADRRI Journal of Arts and Social Sciences*, 15(6), 12-29.
- Osmani, L. N. K. (1998). Impact of Credit on the Relative Well-Being of Women: Evidence from the Grameen Bank. *IDS Bulletin*, 29(4), 31-38.
- Oteng-Abayie, E. F., Amanor, K., & Osei-Fosu, A. K. (2022). Spatial analysis of the effect of microfinance on poverty and inequality in Ghana. *Journal of Social and Economic Development*, 1-36.
- Owusu, J., Akandasiam, A. C., & Anyesepari, A. A. (2013). Microfinance schemes and poverty reduction among women in the northern region of Ghana. *International Journal of Humanities and Social Science*, 3(19), 99-108.
- Owusu-Danso, T. (2015). Implications of Microfinance for gender inequality in Ghana. Perova E.,(2010). *Three Essays on Intended and Not Intended Impacts of Conditional Cash Transfers*. University Of California, Berkeley, 15-16.
- Parmar, A. (2003) Micro-Credit, Empowerment, and Agency: Re-Evaluating the Discourse, *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, 24:3, 461-476, DOI: 10.1080/02255189.2003.9668932

- Parpart, J. L., Rai, S. M., & Staudt, K. A. (Eds.). (2003). *Rethinking empowerment: Gender and development in a global/local world*. Routledge.
- Peprah, J. A. (2012). Access to micro-credit well-being among women entrepreneurs in the Mfantseman Municipality of Ghana. *International Journal of Finance & Banking Studies* (2147-4486), 1(1), 1-14.
- Peprah, J. A. (2018). Microcredit, Child Education, and Health Outcomes: A Case Study from Ghana. *Financing Sustainable Development in Africa*, 339-365.
- Peprah, J. A., & Koomson, I. (2017). Economic drivers of domestic violence among women: A case study of Ghana. In *Violence and society: Breakthroughs in research and practice* (pp. 222-240). IGI Global.
- Pitt, M. M., Khandker, S. R., & Cartwright, J. (2003). Does micro-credit empower women? Evidence from Bangladesh. *Evidence from Bangladesh* (March 2003).
- Posso, A., and P. Athukorala. 2018. "Microfinance and Child Mortality." *Applied Economics* 50 (21): 2313–2324. doi:10.1080/00036846.2017.1394976.
- Raihan, S., Osmani, S. R., & Khalily, M. B. (2017). The macro impact of microfinance in Bangladesh: A CGE analysis. *Economic Modelling*, 62, 1-15.
- Revenge, A., & Shetty, S. (2012). Empowering women is smart economics: closing gender gaps benefits countries as a whole, not just women and girls. *Finance & Development*, 49(001).
- Salia, S., Hussain, J., Tingbani, I., & Kolade, O. (2017). Is women empowerment a zero sum game? Unintended consequences of microfinance for women's empowerment in Ghana. *International Journal of Entrepreneurial Behavior & Research*.
- Seidu, A. H., & Bambangi, S. (2006). Micro-credit and poverty alleviation: The Performance of Women in Micro-credit Activities in the Kassena Nankan District of Ghana. *Ghana Journal of Development Studies*, 3(2), 41-56.
- Sen Gita, Batliwala Srilatha. *Empowering Women for Reproductive Rights*. In: Presser Harriet B, Sen Gita., editors. *Women's Empowerment and Demographic Processes*. Oxford, U.K.: Oxford University Press; 2000. pp. 15–36.

- Stephens, D. (2000). Girls and basic education in Ghana: A cultural enquiry. *International Journal of Educational Development*, 20(1), 29-47.
- Tanaka, T., Nuamah, C., & Geiger, M. (2018, December 14). Ghana's challenges: Widening regional inequality and natural resource depreciation. *World Bank Blogs*. Retrieved May 16, 2023, from <https://blogs.worldbank.org/africacan/ghanas-challenges-widening-regional-inequality-and-natural-resource-depreciation>
- Tchouassi, G. (2011). Microfinance, inequality and vulnerability: Empirical analysis from Central African countries. *Journal of Development and Agricultural Economics*, 3(4), 150-156.
- Tetteh, E., Antwi, K. B., & Opareh, N. O. (2014). Microcredit and Women Empowerment: Evidence from Microcredit Clients of the Upper Manya Krobo Rural Bank in the Eastern Region of Ghana.
- Vaessen, J., Rivas, A., Duvendack, M., Jones, R. P., Leeuw, F., Van Gils, G., ... & Waddington, H. (2014). The effects of microcredit on women's control over household spending in developing countries: A systematic review and meta-analysis. *Campbell systematic reviews*, 10(1), 1-205.
- Vanroose, A., & D'Espallier, B. (2013). Do microfinance institutions accomplish their mission? Evidence from the relationship between traditional financial sector development and microfinance institutions' outreach and performance. *Applied Economics*, 45(15), 1965-1982.
- World Bank (n.d.). Ghana. *World Bank Gender Data Portal*. Retrieved May 16, 2023, from <https://genderdata.worldbank.org/countries/ghana/>
- Yunus, M. (2004). Grameen Bank, Microcredit and Millennium Development Goals. *Economic and Political Weekly*, 39(36), 4077-4080. <http://www.jstor.org/stable/4415509>
- Zacharias, A. (2021, June 23). MEASURING PATRIARCHY: MESOLEVEL VARIATIONS IN THE STRENGTH OF PATRIARCHY IN SUB-SAHARAN AFRICA. Retrieved April 25, 2023, from https://www.levyinstitute.org/conferences/midway2021/presentations/session_1_zacharias.pdf

Zhang, Q. (2017). Does microfinance reduce poverty? Some international evidence. *The BE Journal of Macroeconomics*, 17(2).

Ziem, R. & Der Bebelleh F. (2014). Microfinance an Rural Women Empowerment in the Kpandai District of Ghana: the Role of SEND Ghana Microfinance Scheme. *European Journal of Business and Management*. 6(24), pp. 50-62

Appendix A

Table 4a: List of papers on microcredit and women empowerment in Ghana

<i>Study</i>	<i>Year</i>	<i>Title</i>	<i>Journal</i>	<i>Summary of findings</i>	<i>Method</i>	<i>Sample size</i>	<i>type of microcredit</i>	<i>Region</i>	<i>Included</i>
Acheampong & Alnaa	2013	Impact of microcredit on poverty reduction among rural women in Ghana: The case of Upper East Region	<i>Oguaa Journal of Social Sciences</i>	Microcredit has a positive impact on poverty.	Quasi experimental survey	249		Upper East Region	Meta-regression
Adams & Bartholomew	2010	The impact of microfinance on maize farmers in Nkoranza (Brong Ahafo Region of Ghana).	<i>Journal of Management Research</i>	The key issue identified by most of the recipients is lack of entrepreneurial skills and market for their produce.	Interviews, focus group discussions	100	savings	Brong Ahafo	Thematic review
Adam & Brigandi	2017	Effects of Micro Credit on the Income of Women in the Gushegu District of the Northern Region	<i>ADRRRI Journal (Multidisciplinary)</i>	The study also found that microcredit has a significant impact on the incomes of women involved in Small Scale Business in Gushegu District.	cross-sectional survey, interviews,	55	credit	Northern Region	Thematic review
Addae-Korankye & Abada	2017	Microfinance and Women Empowerment in Accra, Ghana	<i>Asian Economic and Financial Review</i>	Microcredit has a positive impact on women entrepreneurs.	Surveys + regression (OLS)	900		Greater Accra	Meta-regression
Addai	2017	Women Empowerment Through Microfinance: Empirical Evidence from Ghana	<i>Journal of Finance and Accounting</i>	Increasing access to microfinance is more likely to lead to higher probability of economic empowerment of women as well as higher probability of social empowerment.	Probit model & questionnaires	500			Meta-regression
Adu-Okoree	2012	Enhancing Women's household reproductive roles	<i>International Journal of Academic Research in</i>	The findings revealed that the women contributed the larger portion of their income	Questionnaires, interviews and focus groups discussions	52	Loans	Greater Accra	Thematic review

		through microfinance: A study of women traders in Tema, Ghana.	<i>Business and Social Sciences</i>	to household consumption, thus enhancing their reproductive roles.					
Affum	2020	A Study of Microfinance and Its Impact on the Livelihoods of Market Women; Evidence from Yilo Krobo Municipality, Ghana	<i>European Scientific Journal</i>	The study revealed a positive impact of microfinance on the livelihoods of market women and their households.	Mixed methods: interviews	120	Loan	Eastern Region	Thematic review
Afriyie, Ganle, Segbefia, Kamau, Wamaue-Ngare	2020	Contextual Factors Which Affect the Success of Microcredit Programs Among Women	<i>Journal of Developing Societies</i>	Results suggest that the initial decision to join a microcredit scheme, the type of investment, the business literacy skills of borrowers, the borrower's ability to control loan funds and returns from investment made with borrowed funds, and the ability to keep transaction costs low matter most for how microcredit programs affect women borrowers' poverty in Ghana. .	mixed methods: in-depth interviews, focus group discussions	135			Thematic review
Akpalu, Alnaa, Aglobitse	2012	Access to microfinance and intra household business decision making: Implication for efficiency of	<i>The Journal of Socio-Economics</i>	Access to microfinance increases efficiency by 11%; and enterprises with male spousal influence were less efficient than their counterparts that were	OLS and tobit	246	loan	Upper East Region	Meta-regression

		female owned enterprises in Ghana		independently managed by the women.				
Akudugu, Egyir & Mensah-Bonsu	2009	Women farmers' access to credit from rural banks in Ghana	<i>Agricultural Finance Review</i>	The paper provides empirical evidence of close gender parity in terms of credit supply by RBs in Ghana	Logistic	200		
Al- hassan	2011	Is Microcredit a Viable Strategy for Empowering Women?	<i>Ghana Journal of Development</i>	Beneficiary women have been able to improve their socio-economic conditions through investments in personal assets, business development, productivity and skills development.	Descriptive and reviews of outcomes	n/a		Thematic review
Al-Hassan, Abdul-Malik & Andani	2011	The role of Grameen Ghana in improving income of women shea butter processors	<i>Academic Journals</i>					
Al-hassan & Bambagi	2006	Micro-credit and Poverty Alleviation: an analysis of the performance of women in microcredit activities in the Kassena Nankana district of Ghana	<i>Ghana Journal of Development</i>	Women have increased their incomes and savings levels as well as their household responsibilities (decision-making)	Questionnaires and descriptive statistics	80	Upper East Region	Thematic review
Alhassan , Hoedoafia & Braimah	2016	The Effect of Microcredit on Profitability and the Challenges of Women Owned SMEs: Evidence	<i>Journal of Entrepreneurship and Business Innovation</i>	Results indicate that there is an increase in the average monthly gross profit over time.	Mixed methods: semi-structured questionnaires and semi-structured interviews.	n/a	Northern Region	Thematic review

Alhassan & Akudugu	2012	from Northern Ghana Impact of Microcredit on Income Generation Capacity of Women in the Tamale Metropolitan Area of Ghana	<i>Journal of Economics and Sustainable Development</i>	. Beneficiary women are more empowered to engage in income generation activities. There are improved gender relations, social cohesion and solidarity among women all of which support them in their income generation activities.	Interviews	90 beneficiaries and 30 non-beneficiaries	Northern Region	Thematic review
Alnaa	2017	Micocredit to Rural Women, Intra-household Power Play and Employment Creation in Northern Ghana	<i>Journal of Interdisciplinary Economics</i>		Probit and questionnaire (primary data)	320	Northern Region	
Amanor, Oteng-Abayie, Osei-Fosu & Frimpong	2023	A decomposition analysis of microcredit welfare gaps in Ghana. A gender analysis.	<i>Social Sciences & Humanities Open</i>					
Angko	2013	Microfinance and Poverty Reduction Nexus among Rural Women in Selected Districts in the Upper West Region of Ghana	<i>Developing Countries Studies</i>	The results indicate that access to microfinance can help women acquire and accumulate assets thereby enabling them improve their well-being.	logit model	200 loans	Upper West Region	Meta-regression
Annim & Alnaa	2013	Access to microfinance by rural women : Implications for poverty reduction	<i>Research in Applied Economics</i>					

Ansoglenang	2006	in rural households in Ghana Rural Women and Micro-credit schemes: cases from the Lawra District of Ghana	<i>Master Dissertation</i>	The members of the credit schemes have gained more assets, greater control, and more say in household decision-making processes	Questionnaire + descriptive statistics	40		Upper West Region	Excluded
Amankwa, Bawole, Mensah, Mohale	2021	The Politics of Microcredit Facilities as Pro-poor Intervention in Solving Gender Inequality in Ghana: the Political Settlement Perspective	<i>Global Social Welfare</i>	The study showed significant improvement in the lives of women who benefitted from the facility..	Structured interviews				Thematic review
Asare-Bediako & Frempong	2016	The impact of microfinance in rural households in the Western Region of Ghana	<i>American Scientific Research Journal of Engineering, Technology, and Sciences</i>			384	Loan	Western Region	Meta-regression
Asomoah, Darkwah & Amoah	2015	Microcredit Schemes: A Tool for Promoting Rural Savings Capacity among Poor Farm Families: A Case Study in the Easter Region of Ghana	<i>Open Journal of Social Sciences</i>	Microcredit enhanced the savings capacity of the participants in the eastern region.	Questionnaires	212		Easter Region	Thematic review
Atta Peprah	2018	Microcredit, Child Education, and Health Outcomes:	<i>Chapter in 'Financing Sustainable Development in Africa'</i>						

Atta Peprah	2012	A Case Study from Ghana Access to micro-credit well-being among women entrepreneurs in the Mfantseman Municipality of Ghana	<i>International Journal of Finance & Banking Studies</i>	The results of the study indicate that clients' well-being influences access to credit amount.	Mixed methods: Structured questionnaires + OLS	320	credit	Central Region	
Atta Peprah	2017	Economic drivers of domestic violence among women: A case study of Ghana.	<i>Chapter in 'Violence and Society'</i>	Access to microcredit increase the probability to domestic violence	Logit	256	credit	Central Region	Meta-regression
Awuah & Amoako	2014	Impact Assessment of Microcredit on the Well-being of Women in Ghana: a Case of Atwima Mponua District, Ghana	<i>International Journal of Economics, Commerce and Management</i>	Microcredit facilities have a positive effect on the well-being of women in terms of their ability to afford quality healthcare, children's education and comfortability in current accommodation.	Structured interviews and logit	400		Ashanti Region	Not included in the Meta-regression because they did not report the standard errors
Awuno-Vitor & Kwansah	2012	Women participation in microcredit and its impact on income: a study of small-scale businesses in the Central Region of Ghana.	<i>American Journal of Experimental Agriculture</i>	The results showed that women operating small businesses with microcredit had statistically significant higher income compared with their non-microcredit participating counterpart.	Structured questionnaire and interview schedule + probit		microcredit	Central Region	
Ayam, Abangbase, Dadzie	2020	Perceived Effects of Microfinance on Women Empowerment in Lankawantanang-	<i>International Journal of Development</i>	Access to micro credit increased participants' incomes and savings, improved their standard of living and increased	Cross-sectional survey + paired sample t test	189	Loans and savings	Greater Accra	

		Madina Municipality		their participation in decision making within the family.					
Azanlerigu & Kuntulo	2015	Assessing the impact of micro-finance in reducing poverty among women in the Bolgatanga municipality in Ghana: A case study of Sinapi Aba Trust	<i>Research Journal of Finance and Accounting</i>	The findings established that women held the view that microfinance has been very supportive as their income levels had increased substantially in contemporary times	Mixed methods: questionnaires + regression	600	not specified	Ashanti Region	Meta-regression
Batinge & Jenkins	2021	Gender and Poverty Reduction in Ghana: The Role of Microfinance Institutions	<i>International Journal of Economics and Finance</i>	The results indicate that access to microfinance services positively correlates to health, education, living standards and poverty reduction.	Questionnaire, OLS	255	microinsurance	Bono East Region	Meta-regression
Batinge	2018	Women access to microfinance loans on children formal education: A case of rural northern migrant in the Brong Ahafo region of Ghana	<i>Journal of Business & Financial Affairs</i>	The findings revealed increase in quality of food, nutrition and health care of micro clienteles.	Mixed method: survey + descriptive	500	microloans	Brong Ahafo region	Thematic review
Boateng & Poku	2019	Accessing finance among women-owned small businesses: evidence from lower Manya Krobo municipality, Ghana.		The study revealed that there are constraints of poor market demand and lack of capital and credit against women	In depth interviews and group discussions	50	susu savings	Eastern Region	Thematic review
Butler, Kobati, Anyidoho, Colecraft, Marquis &	2012	Microcredit-nutrition education link: A case study analysis of	<i>African Journal of Food, Agriculture, Nutrition and Development</i>	The findings suggested that the greatest benefit to participants from the ENAM experience was its translation into	semi-structured interviews	18			Thematic review

Sakyi-Dawson		ghanian women's experiences in income generation and family care		opportunities for obtaining microcredit, which in turn, helped increase women's business success.					
Cheston & Kuhn	2002	Empowering Women Through Microfinance	<i>Draft, Opportunity International,</i>	Access to credit and business training have helped women expand and improve their businesses, leading to increased respect and decision-making power in the home and community.	focus groups discussions and in-depth interviews		10 women and 11 husbands of clients		Thematic review
Dankwa Der Bebelleh & Ziem	2014	Microfinance and Rural Women Empowerment in the Kpandai District of Ghana: the Role of SEND Ghana Microfinance Scheme	<i>Master thesis European Journal of Business and Management</i>	Beneficiary woman benefits; 39% reported improved access to child education, 27% in access to healthcare services and 14% in improved nutrition among others.	group discussion and interviews	136	5-cycle group loan + compulsory saving	Northern Region	Thematic review
Domanban, Asitik & Addy-Morton	2022	The Role of Rural Banks in Poverty Reduction among Women: Evidence from Sonzele Rural Bank, Ghana	<i>Ghana Journal of Development Studies</i>	The study revealed that credit with education was given to women in groups which enabled them to set up various enterprises and experienced an increase in income and expenditure on education and health thus, reducing poverty in the area. Beneficiaries noted that the issues of high-interest charges, short	Structured Interviews + Paired samples t-test	86	credit with education	Upper West Region	Quantitative but it does not use regression analysis

				repayment schedules and absence of insurance policy need attention to make credit a poverty reduction tool.						
Duah & Kyaruzi	2009	Microcredit for Women Entrepreneurs in Ghana: The Case of Women Development Fund in the Accra Metropolis	<i>Chapter in Duah, S., & Kyaruzi, I. S. (2009). Microcredit for Women Entrepreneurs in Ghana: The Case of Women Development Fund in the Accra Metropolis. Female ENTREPRENEURSHIP and Local Economic Growth, 219.</i>		Mixed methods: in depth interviews + infernce statistics and descriptive	400			Accra Greater Region	Thematic review
Effa & Herring	2005	Micro finance support to rural women farmers in Ghana: a case study of the Ga district of the greater Accra region, Ghana	<i>Doctoral Dissertation</i>		Survey	126	loans		Accra Greater Region	Thematic review
Eriksen & Lensik	2015	Measuring the impact of an ongoing microcredit project: evidence from a study in Ghana	<i>Journal of Development Effectiveness</i>	Positive impact on expenditures. No impacts on education, housing quality or female empowerment. Slightly positive on assets.	Dif and dif	452 (treatment) and 472				Not included because they did not report the standard errors
Ganle, Afriyie, Segbefia	2015	Microcredit: Empowerent and Disempowerment of Rural Women in Ghana	<i>World Development</i>	Findings show that some women are empowered along several dimensions as a result of their access to loans.	focus groups and in-depth intervies	230				
Hudu	2009	Socio-Economic Analysis of Livelihood Strategies of Rural	<i>Thesis</i>	The results also show that less than half (40%) of the women borrowers interviewed	in-depth, open ended interviews; direct observation and documents				Northern Region	Thematic review

		Women Beneficiaries of Microcredit in the Tolon/Kumbungu district of the Northern Region of Ghana		have been able to enhance their livelihood asset holdings since they started benefiting from micro-credit.				
Jenkins & Batinge	2018	Microcredit and the Socio-cultural Obstacles to Women's Empowerment in Northern Territories of Ghana.	<i>Kadin/Woman 2000</i>	The research findings indicate that although microfinance appears to have some positive effects on women's income, it is insufficient to ease the hardships in the lives of women in northern Ghana.	247		Northern Region	Do not have access
Kessey	2005	Empowering Muslim women through microcredit scheme: The case of the Sunyani Gonja Muslim women's group.	<i>Working Papers on Ghana: Historical and Contemporary Studies</i>	Furthermore, the study looks at the cultural ramifications of the empowerment within the Muslim community, which is a sub-culture within the predominant Akan culture 3 where Sunyani, the Brong Ahafo regional capital, is located	in-depth interviews		Brong Ahafo Region	Thematic review
Kusi, Yussif & Ismail	2019	Access to micro credit by women entrepreneurs in Ghana: Sinapi aba Trust-Kumasi in Retrospect	<i>International Journal of Academic Research in Business and Social Sciences</i>	Women have a role subordinate to men, which reduces their own sense of self-confidence and assertiveness and produces an environment that is basically hostile to succeed in business.	Descriptive survey	60	Ashanti Region	Thematic review
Mannah-Blankson	2018	Gender Inequality and Access to	<i>Journal of African Development</i>			499		Do not have access

Naami	2017	Microfinance: Evidence from Ghana Effects of the Microfinance and Small Loans Centre on Rural Enterprise Growth among Women Beneficiaries in the Brong-Ahafo Region of Ghana	<i>Review of Social Studies</i>		341	group loans (93.5%), individual loans (3.5%), wholesale lending (1.5%)	Brong-Ahafo Region	Quantitative but not regression analysis
Mohammed, Boateng & Freeman	2022	Effect of Access to Microfinance Support on Growth of Women Agro-Processing Enterprises in the Northern Region of Ghana	<i>The International Journal of Business & Management</i>	The study revealed that, access to microfinance support enabled women agroprocessors to acquire credit and business development training which enabled them to improve the quality of their processed products which attracts higher prices.	Mixed methods: cross-sectional survey and Anova	420	Loans	Northern Region Thematic review
Nangpiire & Inanga	2012	Financial and social impact of microcredit on women beneficiaries in Ghana	<i>African Journal of Accounting, Auditing and Finance</i>					Do not have access
Norwood	2014	Women's empowerment and microcredit: A case study from rural Ghana	<i>Journal of International Studies and Development</i>	Results on autonomy show that members with greater education and less wealth are likely to have higher levels of autonomy, and that membership alone does not predict	Logistic and OLS	204		Meta-regression

Norwood	2005	Macro Promises of Microcredit: A Case of a local eSusu in Rural Ghana	<i>Journal of International Women's Studies</i>	increased autonomy. length of membership is positively and statistically significantly related to autonomy. Membersio in an eSusu did not significantly enhance relative wealth, empowerment, family planning practives, knowledge or the feeling of being in control over one's own reproductive destiny.	Questionnaires and semi-structured interviews.	102 members and 102 non members			Thematic review
Norwood	2004	Microeconomic Schemes in Rural Ghana: Mixed Method Evaluation of Microcredit Membership on Women's Empowerment, and Family Planning Practices	<i>Dissertation</i>						Do not have access
Norwood	2011	Women, Microcredit and Family Planning Practices: A Case Study from Rural Ghana	<i>Journal of Asian and African Studies</i>	Ghanaian respondents showed no significant differences in family planning practices between members and non-members.	OLS	204			Meta-regression
Ntim	2018	Microfinance and poverty reduction: Evidence from market women in the New Juaben	<i>Journal of Arts and Social Sciences</i>		Descriptive statistics	120	Credit	Easter Region	Thematic review

Owuso-Danso	2015	Municipality, Ghana Implications of Microfinance for Gender Inequality in Ghana	<i>Three Essays on Intended and Not Intended Impacts of Conditional Cash Transfers</i>		logit GLM	500 - 253 beneficiaries and 247 non beneficiaries		Meta-regression
Owusu, Akanbasiam & Anyesenpari	2013	Microfinance Schemes and Poverty Reduction Among Women in the Northern Region of Ghana	<i>International Journal of Humanities and Social Science</i>	The study found out that MFIs give credits with conditions that are not favourable to the needs of the women.	Focus group discussion, individual interviews and participants' observation		Northern Region	Thematic review
Sackeyfio	2021	Gender, Microfinance, and Microcredit in West Africa: Empowerment for Whom?	<i>New Political Science</i>	This article has argued that the capacity of Ghanaian and Nigerian women to move beyond microfinance and microcredit institutions depends on how well they marshal political and economic dynamics under globalization to become sovereign producers	literature review			N/A
Salia, Hussain, Tingbani & Kolade	2018	Is women empowerment a zero sum game? Unintended consequences of microfinance for women's empowerment in Ghana	<i>International Journal of Entrepreneurial Behaviour & Research</i>	The economic benefits of microfinance for women is also directly associated with conflicts amongst spouses, girl child labour, polygyny and the neglect of perceived female domestic responsibilities due to women's devotion to their enterprises	Mixed method: household questionnaire surveys, focus group discussions and key informant interviews	260 credit, savings		Meta-regression

Seidu & Bambagi	2006	Micro-credit and poverty alleviation: The Performance of Women in Micro-credit Activities in the Kassena Nankan District of Ghana.	<i>Ghana Journal of Development Studies</i>		Questionnaires, focus groups, observations + descriptive statistics	n/a	Loan	Upper East Region	Thematic review
Siakwah	2010	Microcredit as a strategy for poverty reduction, Youth and Women Empowerment, Ghana	<i>Master thesis</i>						n/a
Tetteh, Antwi & Opareh	2014	Microcredit and Women Empowerment: Evidence from Microcredit Clients of the Upper ManyaKrobo Rural Bank in the Eastern Region of Ghana	<i>International Journal of Emerging Trends in Science and Technology</i>	The paper has however demonstrated that microcredit to a large extent contributed to women's empowerment. The clients had increase income, own assets such as building and plots for building, assumed respectable positions in society and were part of the household decision making process.	Mixed Method: interviews + descriptive results			Eastern Region	Thematic review
Wringley-Asante	2012	Out of the dark but not out of the cage: women's empowerment and gender relations in the Dangme West district of Ghana	<i>Gender, Place & Culture</i>					Greater Accra Region	n/a

Appendix B

Figure 21: Forest Plot of the studies using OLS estimation method

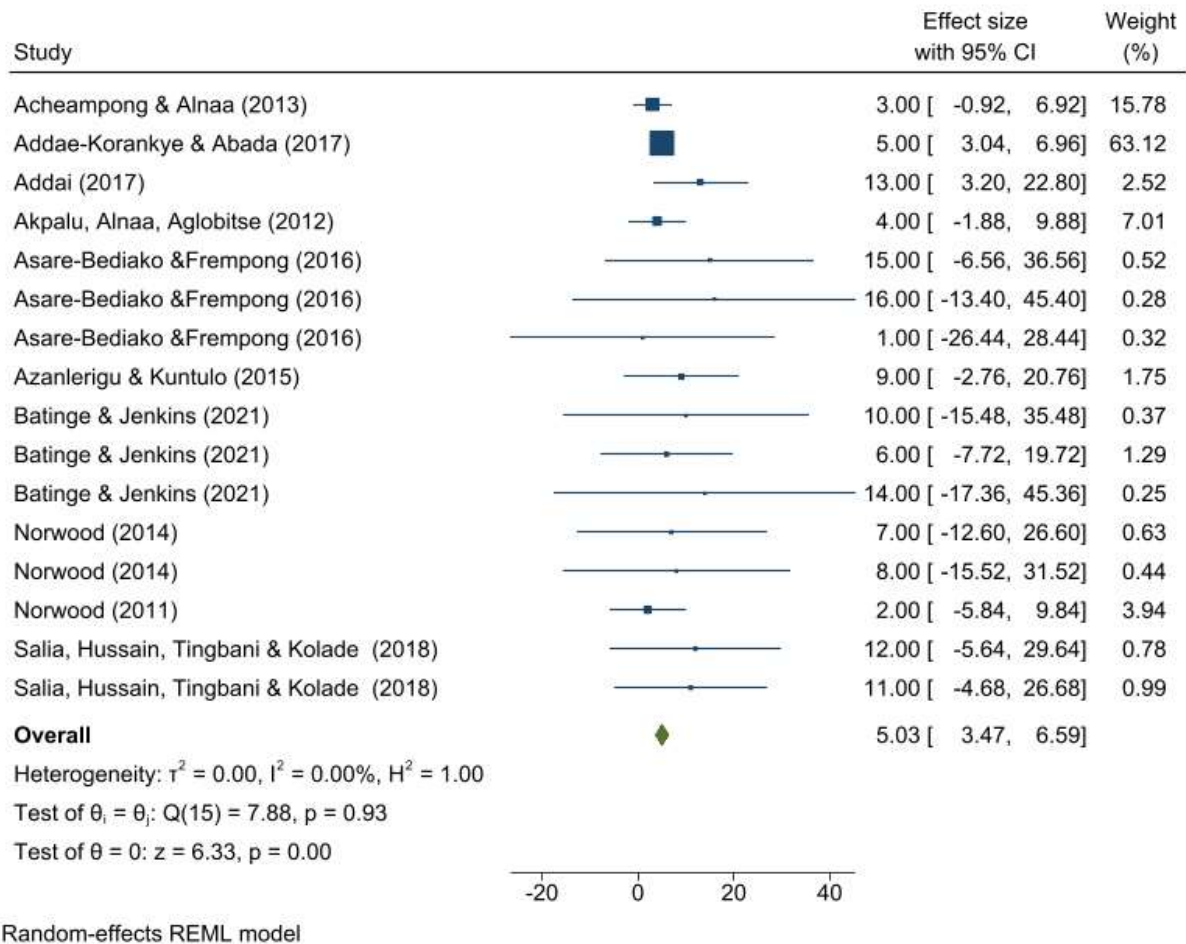


Figure 22: Forest plot of the studies using logit estimation method

