



Impact of Microfinance on Women Empowerment With Moderating Roles of Education and Age: Empirical Evidence from Egypt

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Abstract

The aim of this research is to investigate the influence of Microfinance on Women Empowerment with Moderating Roles of Education and Age in Egypt. The objectives of this research are: to investigate the relationship between Microfinance and Women Empowerment in Egypt, to identify how Microfinance impacts Economic Empowerment, to examine how Microfinance impacts Socio-Cultural Empowerment, to determine how Microfinance impacts Familial/Interpersonal Empowerment, to examine how Microfinance impacts Political Empowerment, to investigate how Microfinance impacts Legal Empowerment, to identify how Microfinance impacts Psychological Empowerment, to analyze the moderation role of education level between Microfinance and Women Empowerment, to examine the moderation role of Age between Microfinance and Women Empowerment, to develop a framework for the relationship between Microfinance and Women Empowerment with moderating role of education and age using structural equation modelling. The methodology used is focused on quantitative analysis utilizing an online survey tool to collect the necessary data and AMOS software for structural equation model analyses (SEM). The study's main findings are that: The direct effect between Microfinance and Economic Empowerment is statistically significant, the direct effect between Microfinance and Socio-Cultural Empowerment is statistically significant, the direct effect between Microfinance and Familial/Interpersonal Empowerment is statistically significant, the direct effect between Microfinance and Political Empowerment is statistically significant, the direct effect between Microfinance and Legal Empowerment is statistically significant and the direct effect between Microfinance and Psychological Empowerment is statistically significant. Finally, the study found that education level and age moderate the relationship between Microfinance and Women Empowerment in Egypt.

Keywords: *Microfinance, Women Empowerment, Socio-Cultural Empowerment, Economic Empowerment, Political Empowerment.*

Introduction

Globally, the gender discrepancy between men and women is not considerable, but women have less authority. According to Bill Clinton (cited by Sohail, 2014), women perform 66% of global work, produce 50% of global food, yet earn only 10% of global income and hold 1% of global property. Around 70% of the world's destitute are female (Singh et al., 2022). Additionally, women are stigmatized and often have trouble obtaining loans in the formal sector, owing to the requirement for substantial collateral (Wondimu et al., 2023).

Women empowerment and microfinance have been acknowledged as essential developmental instruments for combating poverty among women, particularly in emerging nations (Singh et al., 2022). Women are a vital element of society, and as such, the development of society is impossible without their involvement. Empowering women increases their involvement in the labour force and decision-making

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processes, reduces poverty, and greatly increases their contribution to national income and development in their countries.

Microfinance institutions' services are vital tools to create social and psychological facilities for clients, including improvements in self-confidence, enhancing education, health facilities, and leadership capabilities (Gnawali, 2018). Microfinance is a no-collateral loan given to the poorest people in rural areas where traditional banks have disregarded these communities due to a lack of collateral and regulatory systems that make borrowers' loan repayments exceedingly difficult, if not impossible (Abebe et al., 2023).

Microfinance services also benefit women and play an essential role in their empowerment. Economic empowerment is designed to generate increased self-esteem, respect, and other forms of empowerment for women beneficiaries. More specifically, microfinance services as development organizations are to service the financial needs of un-served or underserved markets as a means of meeting development. It includes reducing poverty, allowing them to earn an independent income, empowering women or other disadvantaged population groups to create employment (Tariq and Sangmi, 2019).

The contribution of household income has a significant effect on economic development and has changed the living standards of millions of people in the world, especially women in developing countries (Ayam et al., 2020). Developing countries have had effective microfinance to increase incomes, improve saving capacity, and give women control over resources (Kumari et al., 2019). Microfinance is one of the dominant institutions to reduce poverty in developing countries, where women lack financial resources, live in rural areas, and live below the poverty line, all of which are critical for women's empowerment and the ability of women (Sharaunga et al., 2019).

Microfinance benefits both the unbanked and the under-banked and contributes to poverty reduction. Microfinance is the provision of financial services to low-income consumers via microcredit, mandatory savings, and microinsurance, bringing financial services into the reach of millions who are regarded as being too poor to be financed by universal banks. Microfinance is frequently directed at women, and as such has become a vital tool for women empowerment. According to Ding et al., (2020), women empowerment through microfinance has the potential to positively affect women in two ways. To begin, microfinance enables underprivileged women to make income independently of their husbands and to support their families financially, immediately boosting their self-esteem. Second, it liberates women from the limitations of their household precincts and integrates them into a larger community when they gain access to credit and use it to launch income-generating activities. Their self-confidence is fostered via exposure to the larger community and contact with other women within the group. Due to the limited research conducted on microfinance and women empowerment in Egypt, this paper is conducted to fulfill this research gap. Therefore, the main aim of this paper is to make generalized assumptions about the Impact of Microfinance on Women Empowerment with Moderating Roles of Education and Age in the Egyptian society.

Literature Review and Theoretical Framework

Microfinance is considered' as the independent variable and Women Empowerment (Socio-Cultural, Economic, Familial/Interpersonal, Political, Legal and Psychological) is considered as the dependent variable. In the following subsections we will discuss:

Microfinance and Women Empowerment

Gender equality and women's empowerment are seen as critical to global progress, and can be accomplished by providing women with affordable financial services (Bhatia and Singh, 2019). Microfinance institutions are thought to help disadvantaged individuals, particularly women, through empowering them and strengthening economic and social frameworks (Ding et al., 2020).

According to Parvin (2020), microfinance is essentially women banking. Women make up a large percentage of microfinance clients and recipients. According to Harris (2009), women account for roughly 71 percent of total borrowers worldwide, and 84 percent of the world's poorest borrowers are indeed women, debating the myth that microfinance does not reach the poorest (Nxumalo et al., 2019). Women are targeted by microfinance institutions due to their low default rate (Al-Mamunet al., 2014).

The majority of microfinance programs in the world were created with the goal of empowering women. Microfinance, according to Parvin (2020), empowers women through changing household choices and bargaining power, boosting overall resources, affecting human capital returns, and shaping attribute and norms. Women are among the poorest, most vulnerable, and underprivileged people on the planet, thus empowering them must be a top concern. Several studies have found that increasing women's resources has a positive impact on family well-being, particularly among children (Jalil, 2021).

In Ghana, Akudugu (2011) found that financial capital from microfinance also benefits women's livelihoods by increasing access to healthcare, education, and income levels. Norwood (2011), however, discovered that membership in a microcredit institution does not increase contraceptive use in Abokobi and Pantang, two Accra suburbs. Wondimu et al., (2023) established that microfinance considerably increased the well-being of women in Ghana's Central Region.

Kato and Kratzer (2013) argued that, increasing women's access to financial services can help them develop greater confidence and independence. Additionally, they claim that microfinance helps women to participate more fully in family and community decisions and to more effectively tackle fundamental gender inequalities.

Microfinance and Economic Empowerment

Microfinance studies have examined the impact on economic empowerment on three levels: the person, the home, and the firm. In Ghana, for example, Kamaluddeen (2019) discovered that microfinance clients saw a \$36 gain in monthly income, compared to non-clients (the control group), who saw a \$17 rise. Rajper et al., (2018) discovered that a whopping 100% of female clients had increased income, which improved their welfare as a result of improved education, consumption, and healthcare, as well as smoothing consumption through savings; women were thus economically empowered in Sindh.

Similarly, Mekonnen & Zewudu (2019) stated that microfinance's primary effect is to boost the incomes of the poor (including women) through credit disbursement. Second, microfinance is said to level out income fluctuations, thereby assisting the poor in dealing with emergencies and other shocks. According to Hussain et al., (2019), when credit enables asset ownership, involvement in low-risk economic activity, and a rise in poor people's savings, their vulnerability decreases. Hussain et al., (2019) multiple investigations on microfinance in various nations discovered a preponderance of favourable evidence in favour of a considerable relationship between a debtor's income level and loan collected.

Kofi Annan explained at the 2005 International year of Microcredit's inauguration that viable access to microfinance alleviates poverty by providing opportunities for income generation, job opportunities, improved education, and health care, as well as enabling individuals to make the decisions and choices that best meet their basic needs (UN, 2005). Additionally, the United Nations (2000) and the United Nations Capital Development Fund (UNDF) stated that microfinance plays an economic role in development by empowering women and other vulnerable people economically and socially. Economic empowerment of women entails providing financial services to women in such a way that they can grow their assets and capacities in life (Deb, 2012).

However, the degree to which income levels improve as a result of microfinance participation differs considerably according to the baseline income level and/or poverty status. Hussain et al., (2019) demon-

strated that the middle and upper classes benefited more from income-generating loan firms than the lower classes. Additionally, Shaw (2004) discovered that microfinance credits generated higher revenue for less poor clients than for the very poor in a study of two MFIs in Sri Lanka. The net effect of microfinance on income is generally favourable; but it is greater for wealthy borrowers than for poor borrowers (Babajide, 2011).

Likewise, Liu & Xu (2016) found that microcredit has a significant beneficial influence on household profit and income, particularly for second-time borrowers. Awojobi (2014), on the other hand, reject all of the aforementioned perspectives in Nigeria. Microfinance has a detrimental effect on women's income and employment as a result of increased workloads (Kato and Kratzer, 2013).

Microfinance and Socio-cultural Empowerment

Women's empowerment has helped in the reorganization of gender relations in the home and community. It also allows people to challenge and improve their generally passive community environment. Empowerment, according to Lalitha and Prasad (2011), is a technique of creating a community atmosphere in which women can participate in decision-making and choice selection, either individually or collectively, in order to bring about social change (Modi et al., 2014).

Microcredit successfully empowered women in the social sphere even when economic empowerment was not achieved due to a lack of entrepreneurial knowledge and talent, according to Quayes (2015). In a similar line, Vachya & Kamaiah (2015) discovered that self-help groups (SHGs) for microfinance were effective in economically and socially empowering impoverished individuals in rural areas, motivating consumers to take numerous loans. This gives women more opportunities to be economically, socially, and culturally powerful.

Microfinance has been shown in numerous research to have a favorable impact on women's welfare outcomes and mobility. Sundström et al., (2017), for example, found that credit programmes increase women's movement within and outside their communities by requiring them to attend weekly meetings. MFBs also provide clients with the opportunity to travel outside of their areas by requiring an appointment at the program's office as well as attendance at trainings. Rahman et al., (2017) also observed that women's participation in microfinance improves their wellbeing and reduces the chance of male-dominant welfare outcomes, especially in low-income families, improving women's socio-cultural status within society in Bangladesh.

Microfinance and Familial/ Interpersonal Empowerment

According to Sharma & Das (2021), the role of women in household decision-making is influenced by the family structure. A woman who lives in a joint family (i.e., with her husband's family, such as her mother-in-law) is likely to have less autonomy and thus less involvement in household decision-making than a woman who lives in a nuclear family with her spouse and children. Modi et al. (2014) recognised three attributes of the idea of women's empowerment identified by (Khanam et al., 2018). The first is the Inter-spouse Consultation Index, which assesses the degree to which the husband consults with his wife on home concerns. The Individual Autonomy Index, on the other hand, assesses women's self-reported independence in terms of mobility outside the home and spending. The third component is the Authority Index, which evaluates how much genuine power a woman has in making decisions.

Females take on more responsibilities in areas such as education, food, and health as a result of their participation in micro finance bank (MFB) services, which redefines power relations between males and females. After participating in microfinance, Nawaz et al. (2012) demonstrated that over 60% of women clients' household decision-making increased. These are largely male-dominated roles with male-dominated responsibilities (Yao et al., 2022).

This is consistent with the findings of Sundström et al., (2017) who demonstrated that microfinance services result in freedom from relative dominance, greater capability to make minor and major household purchases, and participation in significant household decisions. As a result, women gain increased autonomy and responsibility in joint family decisions, increasing their empowerment and ability to challenge established norms that limit their decision-making abilities (Ashraf et al., 2008; and Blumberg, 2005).

Microfinance and Political Empowerment

Political empowerment is considered as a direct result of the microfinance program. These include political knowledge (Leitch et al., 2018), political participation and political campaigning (Sundström et al., 2017 and Klenke, 2016). It is suggested that when women receive recognition, they typically join committees or groups that help them recognise their potential for prompting other people. It is noted that microfinance organisations have discriminated against women by focusing on them. However, women face discrimination when it comes to loan approval. This means that female borrowers receive lesser loans than male borrowers. This is due to loan officers' impressions of gender norms (Brana, 2013; Agier & Szafarz, 2013; Garikipati et al., 2017).

Numerous research has been conducted on the relationship between microfinance and female empowerment (Bayes, 2005; Pitt et al., 2006; Hofmann & Marius-Gnanou, 2007; Hulme & Arun, 2011; Ali & Hatta, 2012; Kato & Kratzer, 2013; Al-Amin & Mathbor, 2019; Ali & Ghoneim, 2019; Debnath et al., 2019). Several studies have revealed that microfinance has a favourable effect on women's empowerment. The positive impact includes an increase in monthly income for women receiving microfinance, which results in an improvement in purchasing power, welfare, mobility, and self-confidence; some women are reported to have assets in their names. Politically, certain women are believed to have a higher level of political awareness and extensive social networks (Ali & Hatta, 2012; Kato & Kratzer, 2013).

Microfinance and Legal Empowerment

According to Nawaz et al. (2012), an indicator of women empowerment is increasing awareness of their rights and their acceptance of those rights. Microfinance institutions are reportedly providing women consumers with information about a variety of topics related to their rights, which is subsequently spread via word of mouth. Rai and Ravi (2011) reported that after participation in microfinance groups, women expressed an increased capacity to pursue legal action if necessary. Gender disparity is prevalent in practically all sectors of life in predominantly patriarchal nations such as India — marriage, childbirth, education, legal rights, and household decision-making (Buller et al., 2018). In general, married women lack equal rights and are considered as possessions or objects to be possessed by their husbands (Benebo et al., 2018).

Chattopadhyay (2005) defined empowerment as the extension of one's capacity for decision and action in all domains of life (political, economic, and social) in order to design one's own life. The researcher argued that empowerment should be multidimensional in nature, encompassing people's economic, political, legal, and social life. There are numerous waves of feminism and movements within the field of developmental studies that seek to liberate women and shift the social power balance in their favour. However, throughout history, those efforts have been hampered by a variety of issues, including conventional social-cultural mindsets, patriarchal societal structures, legal barriers, and a lack of knowledge (Ragunandan, 2018).

Microfinance and Psychological Empowerment

According to Yao et al., (2022), self-esteem is the value placed on one's own self and contributions, as well as the feelings one has about how others perceive one's self and accomplishments. That is, a person's judgement of their own worth based on their abilities or characteristics (Nikkhah et al., 2010). Kamaluddeen (2019) demonstrated that lending opportunities increased women's empowerment in Nigeria through increased cooperation with neighbors and increased self-confidence.

Numerous researchers see self-confidence and self-esteem as critical first phases of women empowerment (Khursheed, 2021). When marginalized individuals achieve access to financial resources, they not only regain their dignity, but also gain the ability to participate in economic activity and society. Ribeiro et al., (2022) discovered that the knowledge, training, and confidence gained through credit group membership were the most prized benefits of microfinance participation for female clients. According to Kato and Kratzer (2013), economic empowerment alters women's perspectives of themselves and of others. As a result, women's self-confidence in their capacities grows; women begin to accomplish in order to conduct business and make sound judgments that benefit their enterprises and families. This improves a woman's sense of self-worth and self-efficacy.

Research Problem and Questions

It is widely considered that if women achieve economic empowerment through microfinance, they would also achieve empowerment in other aspects. Thus, studies demonstrating that microfinance has an effect on other dimensions of empowerment (Patel and Patel 2017; Jack and Roland 2016; Ajarapu, 2012; Fwanba et al., 2015) demonstrate that this occurs via economic empowerment. That is, microfinance clients must first achieve economic empowerment; and it is this economic empowerment that will result in other forms of empowerment. While an indirect association between microfinance and non-economic empowerment has been proven in the literature, a direct relationship has not been established. No studies have examined the influence of microfinance on other dimensions of empowerment apart from economic empowerment.

Furthermore, the majority of studies examining the impact of microfinance on women empowerment do so from the perspective of self-help groups (SHGs) and microfinance institutions (MFIs). Studies thesis have focused primarily on microfinance from SHGs (e.g., Patel and Patel, 2017; Ajarapu, 2012) and MFIs (e.g., Josephat et al., 2017; Agu et al., 2016; Fwanba et al., 2015), with only a passing mention of microfinance from Microfinance Bank (MFBs). Finally, another gap identified in the research is the emphasis on the income-based model of economic empowerment. Economic empowerment includes several factors in addition to increasing income, such as control over resources, contribution to household expenditure, and financial decision-making. Microfinance's impact on this non-income economic empowerment has gotten limited consideration in previous research. Even when these variables are mentioned in empirical investigations, they are frequently deduced (e.g., Patel and Patel, 2017, Fwanba et al., 2015).

Numerous research on microfinance and women empowerment have been undertaken in Africa and other regions of the world. As previously stated, despite the abundance of studies, some underlying issues can be noticed, necessitating this study. While some studies downplay the importance of other microfinance variables such as savings (Patel and Patel, 2017; Awojobi, 2014; Ziem and Bebelleh, 2014), others overlook intermediary variables such as personal characteristics that have been shown to influence women empowerment, such as initial level of income and initial level of empowerment (Addae-Korankye and Abada, 2017; Daniyan-Bagudu et al., 2016). Additionally, some studies' methodology is not robust in terms of sampling strategy (Modi et al., 2014; Awojobi, 2014) or analytical approach (Daniyan-Bagudu et al., 2016; Jack & Roland, 2016; Awojobi, 2014; Kato & Kratzer, 2013), making generalization of findings impossible. The research questions could be stated as follows:

- 1- What is the relationship between Microfinance and Women Empowerment in Egypt?
- 2- What is the impact of Microfinance on Economic Empowerment?
- 3- What is the impact of Microfinance on Socio-Cultural Empowerment?
- 4- What is the impact of Microfinance on Familial/Interpersonal Empowerment?
- 5- What is the impact of Microfinance on Political Empowerment?
- 6- What is the impact of Microfinance on Legal Empowerment?
- 7- What is the impact of Microfinance on Psychological Empowerment?

- 8- What is the impact of Microfinance on Women Empowerment with moderating role of education?
- 9- What is the impact of Microfinance on Women Empowerment with moderating role of age?

Conceptual Framework

The independent variable “microfinance” is Adopted from Khan and Rehaman, (2007); and Gorrette, (2019). The dependent variable “Women Empowerment” is measured by 6 dimensions. Economic Empowerment, Socio-Cultural Empowerment, Familial/Interpersonal Empowerment are Adopted from Ahmed, (2015); El Hadidi,(2018); and Jannah, (2020). Psychological Empowerment is Adopted from El Hadidi,(2018) ; Jannah, (2020). Political Empowerment is Adopted from Ahmed, (2015);El Hadidi,(2018); Jannah, (2020). Legal Empowerment is Adopted from Josephat, (2017); and Jannah, (2020).

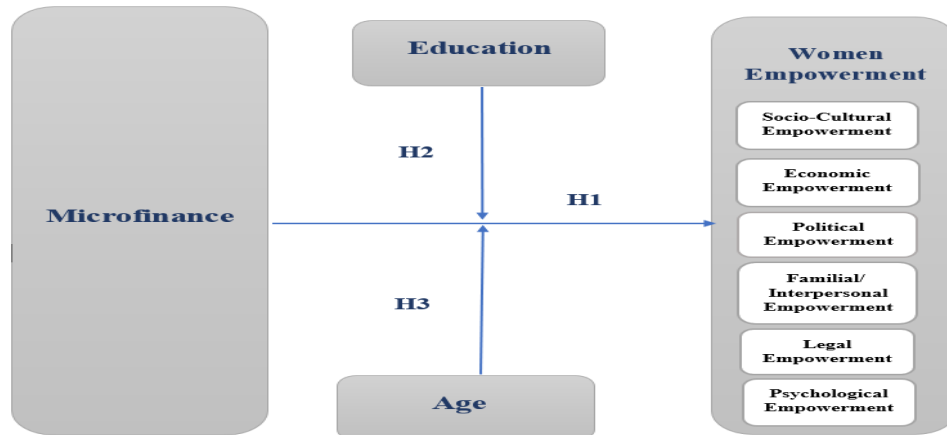


Figure 1 Conceptual Framework

Research Objectives

- 1- To investigate the relationship between Microfinance and Women Empowerment in Egypt
- 2- To identify how Microfinance impacts Economic Empowerment.
- 3- To examine how Microfinance impacts Socio-Cultural Empowerment
- 4- To determine how Microfinance impacts Familial/Interpersonal Empowerment
- 5- To examine how Microfinance impacts Political Empowerment
- 6- To investigate how Microfinance impacts Legal Empowerment
- 7- To identify how Microfinance impacts Psychological Empowerment
- 8- To analyze the moderation role of education level between Microfinance and Women Empowerment
- 9- To examine the moderation role of Age between Microfinance and Women Empowerment

Research Hypotheses

Based on the conceptual framework, the hypothesized model and reviewing of the related studies and theories, the study hypotheses were formulated as below:

- **H1:** It is expected that Microfinance has an effect on Women Empowerment in Egypt
- **H1_{.1}:** It is expected that Microfinance has an effect on Economic Empowerment
- **H1_{.2}:** It is expected that Microfinance has an effect on Socio-Cultural Empowerment
- **H1_{.3}:** It is expected that Microfinance has an effect on Familial/Interpersonal Empowerment
- **H1_{.4}:** It is expected that Microfinance has an effect on Political Empowerment
- **H1_{.5}:** It is expected that Microfinance has an effect on Legal Empowerment
- **H1_{.6}:** It is expected that Microfinance has an effect on Psychological Empowerment

- **H2:** It is expected that Education level moderates the relationship between Microfinance and Women Empowerment in Egypt
- **H3:** It is expected that Age moderates the relationship between Microfinance and Women Empowerment in Egypt.

Research Justifications

Egyptian Women are referred to as the research population in this study. The questionnaire was divided in two broad categories. The first category is made up of general information and the second category is the body of the questionnaire that includes three sections: first: (Microfinance). Second section: Women Empowerment (Socio-Cultural, Economic, Familial/Interpersonal, Political, Legal and Psychological). A Likert-scale was used to measure opinions.

The research questionnaire was given to eight hundred (800) respondents, 544 questionnaires representing 68% were returned, and 66 questionnaires representing 8.2% were incomplete or ineligible or refusals and 256 (32%) were not reached. There were 478 acceptable responses, a response rate 59.8% which is very good given the nature of the study. The structural equation modelling (SEM) software package was utilized in this Research Paper to investigate the interrelationships between the constructs of the hypothesized model. Testing Hypotheses After completing a confirmatory factor analysis, the structural model is valued by evaluating the hypotheses that underpin the research model.

Data Analysis

Cronbach's alpha is a frequently employed measure for assessing the internal consistency of a test. The calculation involves determining the mean of all potential split-half reliability coefficients. The concept of correlation pertains to the degree of association between the scores of respondents on two distinct sets of indicators (Bryman and Bell, 2011). According to Sekaran and Bougie (2016), a higher reliability coefficient is indicative of better reliability. Typically, reliabilities below 0.60 are regarded as poor, while those falling within the range of 0.70 are considered acceptable, and reliabilities beyond 0.80 are deemed good. Table (1) includes the test re-test reliability results by analysis of 40 questionnaires:

The Cronbach's Alpha coefficient for the 37 items evaluated collectively ranged from a minimum of 0.750 to a maximum of 0.939, with an overall coefficient of 0.958. Thus, this study's research instrument demonstrates a high level of reliability, surpassing the commonly accepted reliability score of 0.7

The reliability of a construct in the measurement model is possibly calculated using Composite Reliability (CR). CR determines the consistency of the construct itself and is a more presenting method of overall reliability (Hair et al., 2019). The research result shows the CR of Microfinance = 0.875, Familial/Interpersonal = 0.829, Psychological = 0.805, Political = 0.691, Legal = 0.821, Socio-Cultural = 0.941 and Economic = 0.927). As a result, it is evident that all of the constructs in the measurement model are reliable.

The Average Variances Extracted (AVE) should always be above 0.50. (Hair et al., 2019). Overall, the AVE of the constructs (Microfinance = 0.543, Familial/Interpersonal = 0.591, Psychological = 0.576, Political = 0.574, Legal = 0.550, Socio-Cultural = 0.727 and Economic = 0.678) are more than 0.500. Overall, the measurement results are satisfactory, indicating that the structural model may be evaluated.

Measurement Model Result: The eighth factor was CFA using the AMOS application. The value of DF was 792 (it should be more than 0), c^2/DF has a value of 2.196, that is less than 3.0 (it should be

Table 1: The test re-test reliability

| Variable | No of Items | Cronbach's Alpha (α) | Mark |
|------------------------------------|--------------|-------------------------------|------------|
| Microfinance | 6 Questions | .906 | Acceptable |
| Economic Empowerment | 6 Questions | .944 | Acceptable |
| Socio-Cultural Empowerment | 6 Questions | .965 | Acceptable |
| Psychological Empowerment | 6 Questions | .743 | Acceptable |
| Political Empowerment | 6 Questions | .740 | Acceptable |
| Legal Empowerment | 6 Questions | .749 | Acceptable |
| Familial/Interpersonal Empowerment | 6 Questions | .879 | Acceptable |
| Overall Reliability | 42 Questions | .946 | Acceptable |

less than or equal 3.0). The RMSEA was .050 (it should be less than 0.08). The TLI index was .921 which is very close to 1.0 (a value of 1.0 indicates perfect fit). The CFI was .927. All indices are close to a value of 1.0 in CFA, indicating that the measurement models provide good support for the factor structure determined through the CFA.

Structural Model

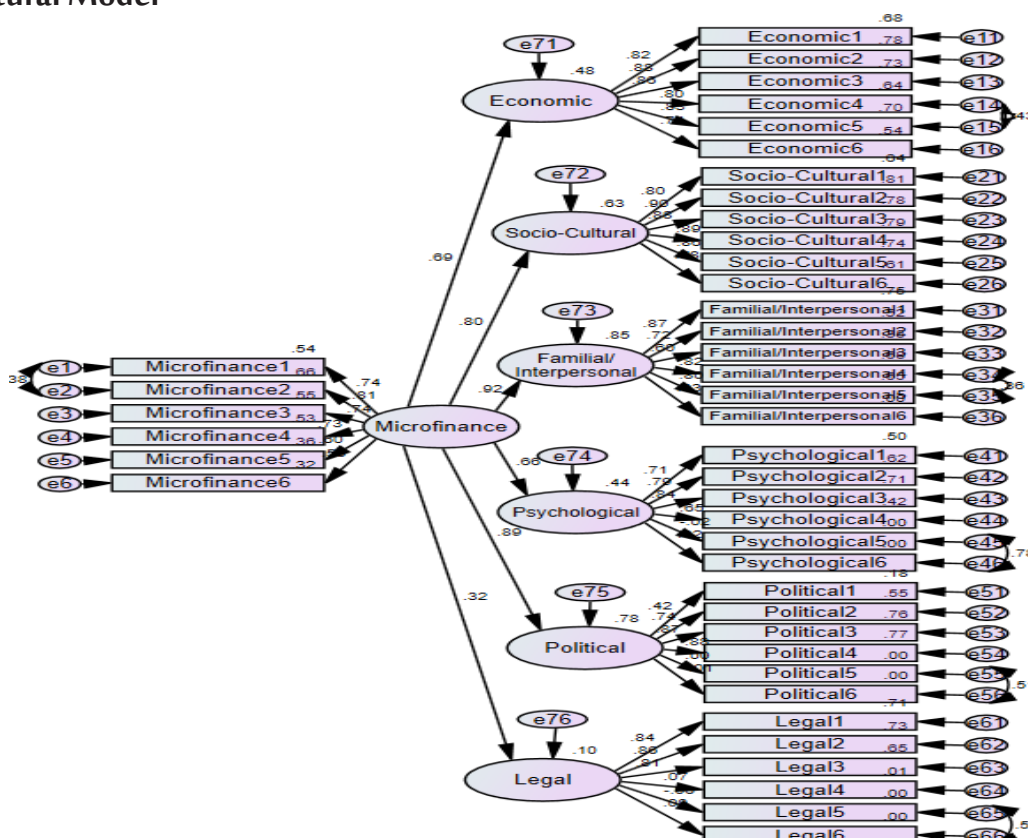


Figure (2) Structural Model

Structural model validity: The findings of the structural model using the AMOS software shows that DF was 807 (it should be more than 0), c^2 / DF has a value of 2.441, that is less than 3.0 (it should be less than or equal 3.0). The RMSEA was .055 (it should be less than 0.08). The TLI index was 0.905 which is very close to 1.0 (a value of 1.0 indicates perfect fit). The CFI was 0.911. All indices are close to a value of 1.0 in CFA, indicating that the measurement models provide good support for the factor structure determined through the CFA.

The individual tests of significance of the relationship between the variables. It reveals that,

- 1- The relationship between Microfinance and Economic Empowerment ($\beta = 0.694$ CR (Critical Ratio) = 13.290, $CR > 1.96$, $p = 0.000$, $p < 0.05$).
- 2- Microfinance has an effect on Socio-Cultural Empowerment is supported as the result shows that ($\beta = 0.796$, CR (Critical Ratio) = 14.756, $CR > 1.96$, $p = 0.000$, $p < 0.05$).
- 3- Microfinance has an effect on Familial/Interpersonal Empowerment is supported as the result shows that ($\beta = 0.922$, CR (Critical Ratio) = 17.637, $CR > 1.96$, $p = 0.000$, $p < 0.05$).

Table 2: Structural model - final Result

| Goodness of Fit Measures | Name of index | Level of acceptance | Model Result | Remark |
|---|---------------|---------------------|--------------|----------|
| Chi-Square | c^2 | > 0.05 | 1969.610 | Accepted |
| Degrees of Freedom | DF | ≥ 0 | 807 | Accepted |
| Chi-Square/ Degrees of Freedom | c^2 / DF | ≤ 3 | 2.441 | Accepted |
| Comparative Fit Index | CFI | $\geq .90$ | .911 | Accepted |
| Tucker Lewis Index | TLI | $\geq .90$ | .905 | Accepted |
| Root Mean Square Error of Approximation | RMSEA | $< .08$ | .055 | Accepted |

- 4- Microfinance has an effect on Political Empowerment is supported as the result shows that ($\beta = 0.886$, CR (Critical Ratio) = 8.633, CR > 1.96, p = 0.000, p<0.05).
- 5- Microfinance has an effect on Legal Empowerment is supported as the result shows that ($\beta = 0.318$, CR (Critical Ratio) = 6.214, CR > 1.96, p = 0.000, p<0.05).
- 6- Microfinance has an effect on Psychological Empowerment is supported as the result shows that ($\beta = 0.661$, CR (Critical Ratio) = 11.268, CR > 1.96, p = 0.000, p<0.05).

Results

The findings and hypothesis testing revealed that the independent variable (Microfinance) had a significant positive impact on Women's Empowerment (Socio-Cultural, Economic, Familial/Interpersonal, Political, Legal, and Psychological) in Egypt in the following ways:

- **First Objective:** to identify how Microfinance impact on Economic Empowerment in Egypt. and **H1_{.1}:** Microfinance has an effect on Economic Empowerment in Egypt. The result indicates that Microfinance has a significant direct relationship with Economic Empowerment in Egypt. Several scholars have conducted research on the relationship between microfinance and economic empowerment in Egypt. Mekonnen & Zewudu (2019), Babajide (2011), and Kato and Kratzer (2013) have all concluded that microfinance has a significant impact on economic empowerment in the country.
- **Second Objective:** to examine how Microfinance impact on Socio-Cultural Empowerment in Egypt and **H1_{.2}:** Microfinance has an effect on Socio-Cultural Empowerment in Egypt. The results indicate that Microfinance positively influences Socio-Cultural Empowerment in Egypt, this finding is supported by previous literature Rahman et al., (2017); and Lalitha and Prasad (2011), who stated that Microfinance has an effect on Socio-Cultural Empowerment in Egypt.
- **Third Objective:** to determine how Microfinance impact on Familial/Interpersonal Empowerment in Egypt and **H1_{.3}:** Microfinance has an effect on Familial/Interpersonal Empowerment in Egypt. The results indicate that Microfinance impact has a significant direct relationship with Familial/Interpersonal Empowerment in Egypt, that result is consistent with Ashraf et al., (2008); Blumberg (2005), who stated that Microfinance impact has an effect on Familial/Interpersonal Empowerment in Egypt.
- **Fourth Objective:** to examine how Microfinance impact on Political Empowerment in Egypt and **H1_{.4}:** Microfinance has an effect on Political Empowerment in Egypt. The results indicate that Microfinance impact has a significant direct relationship with Political Empowerment in Egypt. That result is consistent with Garikipati et al., (2017); Ali and Ghoneim (2019) and Debnath et al., (2019) who stated that Microfinance impact has an effect on Political Empowerment in Egypt.
- **Fifth Objective:** to investigate how Microfinance impact on Legal Empowerment in Egypt and **H1_{.5}:** Microfinance has an effect on Legal Empowerment in Egypt. The results indicate that Microfinance impact has a significant direct relationship with Legal Empowerment in Egypt, that result is consistent with Cornwell (2016); Raghunandan (2018) who stated that Microfinance impact has an effect on Legal in Egypt.
- **Sixth Objective:** to identify how Microfinance impact on Psychological Empowerment in Egypt and **H1_{.6}:** Microfinance has an effect on Psychological Empowerment in Egypt. The results indicate that Microfinance impact has a significant direct relationship with Psychological Empowerment in Egypt, that result is consistent with Kato and Kratzer (2013) Ribeiro et al., (2022) who stated that Microfinance impact has an effect on Psychological in Egypt.

- **Seventh Objective:** to analyze the moderation role of education level between Microfinance and Women Empowerment in Egypt. Based on the results “**H2:** Education level moderates the relationship between Microfinance and Women Empowerment in Egypt” is supported, that result is consistent with Brown, (2018); Martinez et al., (2020) who stated that Education level moderates the relationship between Microfinance and Women Empowerment.
- **Eighth Objective:** to examine the moderation role of Age between Microfinance and Women Empowerment in Egypt. Based on the results “**H3:** Age moderates the relationship between Microfinance and Women Empowerment in Egypt” is supported, that result is consistent with Jones, (2016); Lee et al., (2018) who stated that Age moderates the relationship between Microfinance and Women Empowerment.

Conclusion

The focus of this research is to investigate evaluate the impact of Microfinance on Women Empowerment in Egypt, with Moderating Roles of Education and Age. The study used a quantitative correlational methodology to obtain primary sample data from 478 Egyptian Women. The regression analysis reveals that: All hypotheses are supported. Besides, the study found that education level moderates the relationship between Microfinance and Women Empowerment in Egypt and age moderates the relationship between Microfinance and Women Empowerment in Egypt.

According to the analysis, At the 5% significance threshold, all are considered significant. The estimated structural model corroborated the four hypotheses, as Microfinance construct explained 48.2 % of Economic Empowerment variance ($R^2 = 0.482$), Microfinance construct explained 63.3 % of Socio-Cultural Empowerment variance ($R^2 = 0.633$), Microfinance construct explained 85.1 % of Familial/Interpersonal Empowerment variance ($R^2 = 0.851$), Microfinance construct explained 78.5 % of Political Empowerment variance ($R^2 = 0.785$), Microfinance construct explained 10.1 % of Legal Empowerment variance ($R^2 = 0.101$), and Microfinance construct explained 43.7 % of Psychological Empowerment variance ($R^2 = 0.437$).

Recommendation

Based on the findings of the study, the following recommendations can be suggested:

- 1- **Explore the Role of Financial Literacy:** Investigate the impact of microfinance on women’s empowerment in relation to the level of financial literacy among microfinance customers. Analyze the effectiveness of the financial education programs offered by microfinance institutions for improving knowledge and decision-making and financial knowledge.
- 2- **Examine the Challenges Faced by Microfinance Institutions:** Investigate the barriers and constraints faced by microfinance institutions in promoting women’s empowerment. Analyze the institutional framework, policies, and practices that hinder the effective implementation of microfinance programs, particularly for women with different levels of education and age.
- 3- **Use mixed-methods research.** The strengths of quantitative and qualitative research methodologies may be combined via the use of mixed-methods research. This could help to provide a more thorough understanding of the impact of microfinance on women’s empowerment in Egypt.
- 4- **Make microfinance programs accessible to women in rural areas and to women with lower levels of education.** These are the women who are most likely to benefit from microfinance, but they are also the ones who are most likely to be excluded from traditional financial services.
- 5- **For policymakers and stakeholders in Egypt,** this paper suggests that there is a need to provide support and promotion for microfinance as a means to reduce poverty and empower women. For instance, policymakers and stakeholders may increase financing and regulation for microfinance

institutions, provide a suitable legal and institutional framework for microfinance, and raise public awareness and advocacy for microfinance among stakeholders and the media.

Limitations of the Study

The degree to which the conclusions may be extrapolated to a larger population, cases, or situations is referred to as external validity. (Saunders et al., 2019) As a result, the researcher cannot presume that the findings apply to other situations, so the study excludes:

Generalizability: The fact that this research is specifically focused on Egypt may limit its potential to generalise its results to other countries or areas. In order to have a more thorough understanding, future studies should examine the impact of microfinance on women's empowerment in different settings.

Measurement biases: Due to the complexity of measuring women empowerment, there is a possibility of inherent biases in self-reported data or subjective measurements. Utilizing objective measurement techniques or multiple data sources can enhance the accuracy of future research in this area.

Short-term focus: This study examines the impact of microfinance on women's empowerment, which may overlook the potential long-term effects. To accurately represent the dynamic character of sustained empowerment, future research may consider the effects over an extended period of time.

Future Research Suggestions

The following areas for further investigation are suggested based on the findings of this study:

- **Longitudinal studies:** Conducting longitudinal studies would help track the long-term impact of microfinance on women's empowerment over several years or decades.
- **Comparative analysis:** Comparing the impact of microfinance programs on women empowerment across different socio-cultural contexts and geographical locations can provide deeper insights into the factors that influence the effectiveness of microfinance interventions.
- **Examination of Mediating Variables:** Identifying and examining the mediating variables that connect microfinance, education, age, and women empowerment can help unravel the underlying mechanisms at play. Future research should consider exploring variables such as financial literacy, social networks, and entrepreneurial skills to gain a more nuanced understanding of the relationship.
- **Comparative Studies:** To enhance the generalizability of findings, future research can compare the impacts of microfinance on women empowerment across different countries or regions. This would provide valuable insights into the nuanced relationships between microfinance, education, age, and women's empowerment in various socio-cultural and economic contexts.
- **Mixed-Methods Approaches:** Employing both qualitative and quantitative research methods can provide a more comprehensive understanding of the mechanisms through which microfinance can influence women empowerment. Qualitative research can shed light on contextual factors and individual experiences that quantitative data may not capture.
- **Impact of Specific Program Features:** Future studies can explore the impact of specific features of microfinance programs, such as loan amount, interest rates, repayment schedules, and training components, on women empowerment outcomes. This would help identify best practices and inform policy recommendations for microfinance institutions.
- **Analyze the Role of Financial Literacy:** Investigate the influence of financial literacy on women's empowerment through microfinance. Explore how women's knowledge of financial concepts and practices affects their ability to utilize microfinance effectively. This could involve examining the relationship between financial literacy programs and women's economic decision-making power.

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