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## Fostering Inclusive Growth: Exploring Gender Dynamics and Loan Size in Microfinance Institutions

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ARTICLE DETAILS	ABSTRACT
<p><b>History:</b></p> <p>Received: August 25, 2023                      Accepted: September 15, 2023</p> <p><b>Keywords:</b></p> <p>Women Echelon Position                      Women Focus                      Gender Diversity                      Target Market                      Outreach                      Loan Size</p> <p><b>DOI:</b></p> <p>10.52700/assap.v4i2.301</p>	<p>The financial landscape has witnessed a growing focus on the role of women in driving economic development and achieving sustainable development goals (SDGs). The global pursuit of the SDGs, notably in gender equality and women's empowerment, has highlighted the importance of women's economic involvement. Recognizing the critical role that microfinance institutions (MFIs) play in encouraging inclusive economic growth and poverty alleviation, this study aims to investigate how strategic gender dynamics within MFIs affect loan size. The study addresses a critical gap in understanding the gender dynamics within MFIs concerning women's presence at various echelon positions and their involvement, notably evaluating their impact on loan size. The study examines a meticulously curated dataset consisting of 1295 MFIs from 102 countries using fuzzy set qualitative comparative analysis (fsQCA) methodology. The study's findings, distilled into four configurational solutions, gave fascinating insights into the circumstances under which numerous factors interact to determine loan size in MFIs. Core conditions such as target market, women focus and female outreach were identified as critical drivers of loan size outcomes in various configurations. The implications of women's focus were particularly noteworthy, indicating that a concerted effort to prioritize women's engagement can significantly contribute to increased loan size in MFIs. The findings of this study serve as a foundation for establishing a more equitable and prosperous future through empowered women and effective microfinance practices on a global scale.</p> <p>© 2023 The Authors, Published by WUM. This is an Open Access Article under the Creative Common Attribution Non Commercial 4.0.</p>

## 1. Introduction

In recent years, realizing the sustainable development goals (SDGs) of the United Nations (UNs) about gender equality and women's empowerment have become critical issues globally, garnering significant attention across various sectors and industries. The financial landscape, in particular, has witnessed a growing focus on the role of women in driving economic development and achieving sustainable growth (Datta and Sahu, 2017). In this context, microfinance institutions (MFIs) have emerged as crucial actors, providing financial services, especially loans, to individuals excluded from mainstream banking systems. These institutions have demonstrated their potential to alleviate poverty, empower marginalized communities and foster inclusive economic growth. MFIs operate on the fundamental principle of extending financial services to low-income individuals, primarily in developing countries, who lack access to formal banking systems (Assefa et al., 2013). By providing microloans, savings accounts and other financial products, MFIs enable individuals to engage in income-generating activities, expand their businesses and improve their overall socio-economic conditions (Assefa et al., 2013). As a result, MFIs have gained prominence as powerful tools for poverty reduction and women's economic empowerment, particularly in areas where traditional banking services are limited or inaccessible (Memon et al., 2022).

Regardless of the escalating acknowledgment of the criticality of gender equality within MFIs, a substantial knowledge deficit persists concerning the specific consequences of women's representation across various echelon positions (such as women on board, women managers and women loan officers) and their involvement (like women focus, gender diversity female outreach and target market) in MFIs. Thus, understanding the impact of women's representation at these echelon positions and their involvement in increasing loan size (LS) is of utmost importance for enhancing the effectiveness and inclusivity of microfinance operations globally (Brunninge et al., 2007). It is essential to investigate whether and how the presence of women in these positions and their involvement affects the LS of MFIs. This knowledge can inform policy decisions, program design and resource allocation, ultimately leading to more effective and equitable microfinance practices. This study adopts a configurational analysis approach to examine the interplay between women's echelon positions (WEP), their involvement and LS disbursed by MFIs. Configurational analysis recognizes that the effect of a particular variable on an outcome depends on the configuration or combination of other variables. By employing this analytical framework, the study aims to provide a more nuanced understanding of the conditions under which women's representation within MFIs significantly impacts LS outcomes.

Initially, MFIs were developed with the help of donor funds to reduce the poverty level. However, with time MFIs have to think about their sustainability and stand on their legs due to uncertainty about donors' financing. Thus, market actors are increasing pressure to embrace more commercial approaches for extending their services to clients to attain self-sustainability (Tahir et al., 2021) because sustainability has become a pretty tough, challenging, and general concern for MFIs. Boehe and Cruz (2013) highlighted that women's involvement positively affects MFIs' performance. Similarly, Bannò et al. (2023) reported that active women's participation in echelon positions improves a firm's financial performance (FP). Therefore, MFIs are growingly focusing on women to achieve performance by enhancing LS. Despite the growing recognition of the importance of gender equality within microfinance, there is a significant gap in understanding the specific impact of gender dynamics (women's representation at different echelon positions and their involvement within the organizations) on LS outcomes. While previous researchers (Sarpong-Danquah et al., 2023; Illangakoon et al., 2021) have investigated the relationship between gender and various microfinance outcomes, such as rates of loan repayment, success

in entrepreneurship and reduction in poverty but less attention has been given to the effect of WEP and their involvement on LS of MFIs. Whereas it is a crucial and vital metric that reflects the allocation of financial resources to consumers, and it significantly impacts their economic opportunities and prospects (Tahir et al., 2019). Therefore, it is worth determining whether and how gender dynamics affect LS outcomes.

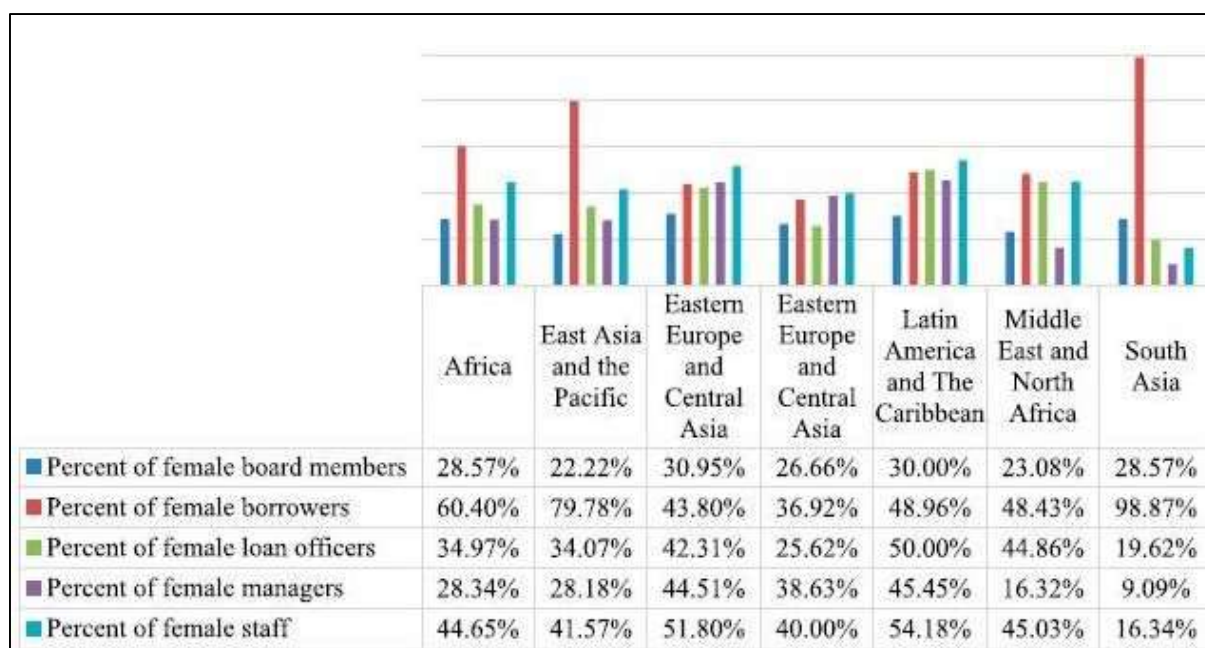
In MFIs, it is essential to understand the connection between WEP, their involvement, and LS due to several reasons. First, gender equality is a fundamental human right, and it is imperative to ensure women's meaningful participation and representation in all spheres of life, including finance (Razavi, 2016). This study contributes to the advancement of gender equality and the promotion of women's empowerment in the microfinance industry by examining the effect gender dynamics on LS. Second, improving the efficacy and inclusiveness of microfinance operations is essential for attaining SDGs. In underserved communities, MFIs promote financial inclusion, reduce poverty, and cultivate entrepreneurship (Memon et al., 2022). Third, using a configurational approach, this study provides new insight into the complex relationship between WEP, gender diversity (GD), women focus (WF), female outreach (OTR), target market (TM) and LS outcomes. Because, conventional linear regression models may overlook critical contextual factors and interactions that influence the relationship between variables. Fourth, configurational analysis permits a comprehensive examination of the conditions under which women's representation at various echelon levels substantially affects LS. This study, thus, aims to provide a nuanced comprehension of how the combination of WEP, WF, GD, female OTR and TM influences LS outcomes in MFIs by employing this analytic framework. Inadequate research on WEP's effect and involvement in LS in MFIs necessitates a comprehensive investigation. This contributes to the global advancement of gender equality, the empowerment of women, and inclusive microfinance practices.

The study on the impact of gender dynamics on LS in MFIs holds substantial importance for policymakers, practitioners, researchers, and the broader community. The present study addresses a significant gap in the current body of knowledge about gender dynamics within microfinance. Although there has been prior scholarly examination into the influence of gender on various outcomes in microfinance, such as loan repayment rates and poverty reduction, there is a shortage of research specifically examining the relationship between WEP, GD, WF, female OTR, TM and LS in MFIs. Therefore, it is imperative to comprehend the intricacies of this correlation to foster evidence-based policies and practices that optimize the beneficial impacts of gender dynamics in MFIs. Furthermore, the use of a configurational analysis approach in this work makes a methodological contribution to microfinance research. Although standard linear regression models have been widely used, the configurational analysis offers a more thorough understanding of how several variables (WEP, GD, WF, OTR, TM) interact to influence LS results. This approach enhances the existing methodological toolkit for investigating the interplay between gender dynamics and LS within microfinance.

The study's rationale is rooted in its significant addition to comprehending the influence of gender dynamics on LS within MFIs. This study aims to fill a substantial vacuum in existing information by examining the precise interconnections between gender dynamics and LS. These relationships have received limited attention in previous research. This study is of utmost importance in establishing evidence-based policies and practices within the microfinance sector. It introduces a methodological novelty by employing configurational analysis, which allows for a more comprehensive understanding of the intricate relationships among various variables that influence the outcomes of LS in MFIs.

Due to their unique position in the global financial landscape and their potential to promote economic development and women's empowerment, MFIs are selected as the focus of this

study (Mukamana, 2016). The decision to investigate MFIs is based on several factors emphasizing their importance in combating financial exclusion, fostering inclusive growth, and facilitating access to finance for marginalized populations. (Ene and Inemesit, 2015) MFIs are crucial in providing financial services to individuals deprived of traditional banking systems. These individuals, who frequently reside in underserved and remote areas, encounter significant obstacles in accessing formal financial services, such as limited collateral, a lack of credit history, and geographical limitations. MFIs bridge this gap by offering inclusive financial solutions to unbanked and underbanked populations with customized microloans, savings accounts, and other financial products (Bharti and Malik, 2022). By concentrating on MFIs, this study recognizes their unique position in reaching financially excluded individuals and investigates the effect of gender dynamics within these institutions on LS.



**Figure 1: Region wise Ratio of Women's Participation in MFIs** (Source: MIX database)

In addition, MFIs have demonstrated a growing commitment to gender equality and women's empowerment. MFIs have frequently prioritized gender-focused initiatives in recent years (Memon et al., 2022). Access to financial services and participation in economic activities is complicated for women in developing nations (Mia et al., 2022). The emphasis of this study on gender dynamics within MFIs correlates with global efforts to increase women's representation and influence in decision-making processes. Figure 1 illustrates region wise ratio of women's participation in MFIs, showing significant efforts of MFIs towards achieving SDGs. Besides, the decision to examine MFIs globally reflects the need to comprehend the contextual factors that influence the association between gender dynamics and LS. Consequently, a global analysis of MFIs permits the investigation of diverse contexts, allowing researchers to identify commonalities, distinctions, and best practices that inform policy recommendations and program design. The document is structured as follows: The literature review, conceptual framework, and hypotheses are presented in Section 2. The third section addresses data acquisition, methods, and analytical approaches. Section 4 describes the results and analysis. Section 5 concludes with implications and directions for future research.

## 2. Literature Review

### 2.1. Women's Echelon Position (WEP) and Loan Size (LS)

WEP means the top positions held by women in MFIs. These positions include women on board (WOB), women managers (WM) and women loan officers (WLO) (Tchuigoua, 2023). LS refers to the quantity of money a MFI lends to a client (Ledgerwood and White, 2006). According to research, the gender of loan officers at MFIs can affect LS. Mainly, research has focused on the role of WLO and its possible effects on LS and MFI performance. Coleman (2016) identified that MFIs with a higher proportion of WLO exhibited lower default rates than those with a lower percentage of WLO. The authors posited that this could be attributed to WLO's effectiveness in cultivating client relationships and ensuring the productive utilization of loans. Gudjonsson et al. (2020) investigated that having more WLO improves the FP of MFIs. Beck et al. (2013) found that WLO were more inclined to extend loans to women borrowers, thereby playing a crucial role in promoting gender equality and empowering women.

The impact of WOB on LS of MFIs is a specific area of research that examines the relationship between GD in MFI governance and the disbursement of loans. For concern, García and Herrero (2021) conducted a study on the influence of female directors on bank loan syndication in Brazil. Although it did not directly focus on LS, their findings suggest a positive association between the presence of female directors and more significant loan syndication amounts, indicating a potentially positive impact on LS. Asiedu et al. (2018) analyzed the relationship between WOB and access to finance (including LS) in African countries. Higher levels of WOB positively affect access to finance, which may contribute to larger LS. Similarly, Mia et al. (2022), using data from 172 MFIs from 1996 to 2014, concluded that having WOB has a positive relationship with FP. Thus, the above findings support the positive relationship between WOB and LS.

Moreover, studies indicated that WMs in MFIs have an impact on LS through their decision-making and operational practices. For instance, Adusei et al. (2017) conducted a study in 76 countries (494 MFIs) between 2010 and 2014. They found that if the percentage of female representation in managerial positions is less than 50%, it negatively impacts the FP. Due Billing and Alvesson (2000) highlighted that women managers exhibit a more cooperative managerial style and behavior than men. Hartarska et al. (2014) also supported that WMs and CEOs, being well-informed about women borrowers, outperform their male counterparts. Thus, WMs have a positive association with MFI performance. Furthermore, Mersland and Strøm (2009) argued that women in top management positions better understand female clients, leading to increased LS in MFIs. Ntim et al. (2020) investigated the relationship between WMs and the FP of MFIs. They found that WMs positively impact the FP of MFIs, which may have implications for loan-related metrics. In summary, the existing literature suggests that WEP (WLO, WOB, WM) can positively impact the performance of MFIs by providing loans, fostering strong client relationships and promoting gender equality. Thus, we propose that:

*H<sub>1</sub>: Women echelon position has positive impact on loan size.*

### 2.2. Women Focus (WF) and Loan Size (LS)

The WF pertains to how MFIs prioritize women during the financing process. If women are provided with more significant possibilities to participate as borrowers, it indicates the existence of women-focused initiatives (D'Espallier, 2013). Donors and practitioners commonly present three primary justifications for targeting women: the promotion of gender equality, the alleviation of poverty, and the enhancement of MFI's efficiency (Mayoux, 1999). Targeting women borrowers has two main reasons, the observed high rates of loan payback by women and the increasing influence of gender advocacy (Weber, 2006). Cull et

al. (2009) determined that transacting several small loans leads to a considerable cost increase, and focusing on women will be linked to increasing operating expenses attributed to these reduced loan sizes. Likewise, several gender-related factors can give rise to supplementary expenses linked to the prioritization of women. A global study undertaken by D'Espallier et al. (2013) within the MFIs found that focusing on women borrowers leads to a notable improvement in loan repayment rates. However, this focus on women enhances FP overall due to higher relative expenses. Abdullah and Quayes (2016) examined the relationship between women borrowers and microfinance profitability. Their research findings indicated a positive association between women borrowers and financial returns. Similarly, Ahmad et al. (2014) examined the profitability of individual-based loans compared to group lending within the context of female borrowers. They observed that individual borrowers play a significant role in promoting financial sustainability of MFIs by enhancing LS. By summarizing above, it is proposed that:

*H<sub>2</sub>: Women focus has positive impact on loan size.*

### **2.3. Gender Diversity (GD) and Loan Size (LS)**

GD refers to recruiting individuals, regardless of gender, while ensuring equal opportunities and fair compensation for employees without any form of bias (Fila and Purzer, 2014). The “*Gender Performance Initiative (GPI)*” was initiated by “*Women's World Banking*” in 2011 to assess the efficacy of financial services firms in catering to women, both as customers and employees. Gravili et al. (2019) examined GD across 28 European states and found a positive association between GD and FP. Zhang (2020) analyzed data from 2007 to 2014 and examined the impact of GD in the workforce. The study found that female participation significantly enhanced FP. Moreover, it has been found that GD positively impacts both financial and social performance (Veltri et al., 2021). According to Hartarska et al. (2014), the involvement of women in leadership positions is widely recognized as a crucial factor influencing the overall FP. Yasser et al. (2017) asserted that women possess distinct attributes essential for positively impacting a corporation's strategic route and facilitating the performance of enterprises. Augustine et al. (2016) investigated the correlation between GD and the economic performance of MFIs in Africa. They found that GD at the workplace positively impacts economic performance. Thus, based on the above literature, it is made that:

*H<sub>3</sub>: Gender diversity has positive impact on loan size.*

### **2.4. Female Outreach (OTR) and Loan Size (LS)**

Female OTR refers to the capacity of MFIs to cater to the women of the market. Typically, outreach denotes the efforts of MFIs to significantly expand their lending activities and serve a substantial number of clients (Memon et al., 2022). Since their inception, MFIs have primarily targeted female clients. As a result, numerous studies have examined women's influence on the success of MFIs. Therefore, numerous foreign donor agencies focused on gender activism prioritize the inclusion of females in their research on the performance of MFIs' programs (Pokhriyal, 2014; Tahir et al., 2018). Makarfi and Olukosi (2011) investigated the allocation of money by Nigerian MFIs to female clients engaged in small-scale entrepreneurial activities, revealing that over 80% of the funds were disbursed to this demographic. Other scholars have expressed similar perspectives (Hermes et al., 2013) about outreach. In a study, Bassem (2012) examined the relationship between outreach and the number of women borrowers. Through his observations, he found that many borrowers from MFIs were women. Hence, building upon the above arguments, we proposed that:

*H<sub>4</sub>: Female outreach has positive impact on loan size.*

### **2.5. Target Market (TM) and Loan Size (LS)**

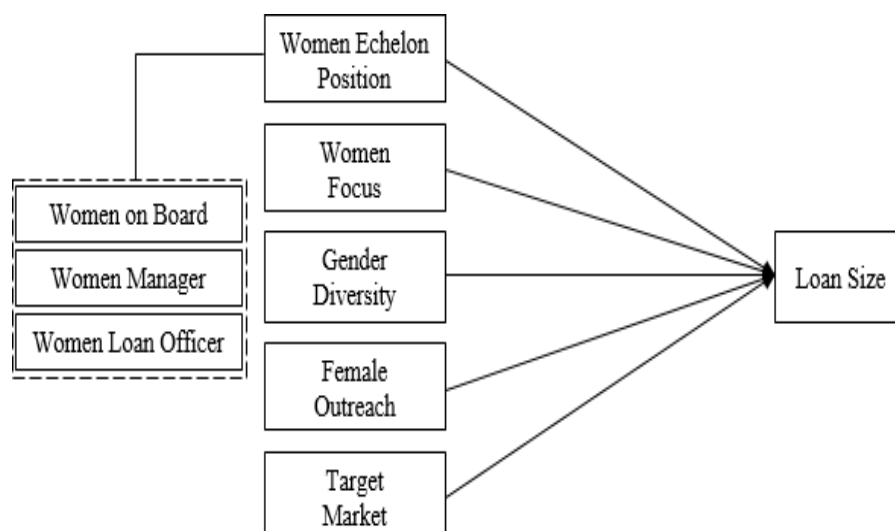
The TM of MFIs for delivering services to borrowers encompasses a range of characteristics, including gender, income level, education, marital status, geography, and business kind. In

the realm of literature, there is a notable emphasize on economy of scale by MFIs to reduce operational expenses and maximize profits through lending to individuals in need (Kono and Takahashi, 2010). This strategic approach allows for the potential expansion of LS. However, scholars commonly argue that for MFIs to achieve FP, they should focus on serving wealthier clients within the poorest population. These affluent clients are more likely to take an average of 15 loans, and their income should be at least 2 to 3 times the country's per capita Gross National Income (GNI). By adopting this approach, MFIs can reduce operational expenses associated with individual loans and enhance economies of scale (Caudill, 2009). However, when MFIs prioritize economies of scale or serving a vast and diversified customer base over their core objective of empowering women, it can have negative consequences for female borrowers (Tahir et al., 2017). This occurs when MFIs shift their focus away from explicitly targeting women and instead aim to reach a broader audience (Bezboruah and Pillai, 2013), which influences LS. By summarizing above, it is proposed that:

*H<sub>5</sub>: Target market has positive impact on loan size.*

**2.6. Theoretical Framework**

By emphasizing the role of resource availability and control, resource dependency theory supports the impact of women in leadership positions and their involvement in LS in MFIs (Simo et al., 2022). As the resource dependency theory suggests that organizations cannot exist and survive in the market for their success without having access to external resources, women play a vital role in attaining external resources for organizations due to their unique style of leadership and knowledge and having different viewpoints than their counterparts (Hussain et al., 2023). Vishwakarma (2017) advised that MFIs should consider the presence of women in their management and at the board level to increase their financial viability and social performance. Consequently, the current era needs to improve the decision-making quality by incorporating GD in managerial positions and board level to broaden the knowledge, expertise, and effective decision-making to attain sustainable performance. MFIs can improve their performance by hiring female in the workplace, which enhances the loan size, especially to attract women borrowers, which ultimately push MFIs towards sustainable performance (D’Espallier et al., 2013).



**Figure 2: Conceptual Framework**

Moreover, when women are integrated into pivotal decision-making positions, MFIs enhance their organizational reputation, credibility, stakeholder engagement, fundraising efforts, investor relationships, and regulatory interactions (Cervelló-Royo et al., 2019). It leads to an augmentation of external resources available to MFIs, consequently resulting in the potential for favorable outcomes. According to Gupta and Mirchandani (2020), enhanced client relationships and greater comprehension can increase loan demand and more significant loan amounts because female managers have more information about women borrowers (Bakker et al., 2014). Thus, in line with resource dependence theory, the inclusion of women in MFIs can enhance resource access, decision-making effectiveness, and client connections, ultimately leading to increased LS. Figure 2 illustrated the conceptual framework of the study.

### **3. Data and Methodology**

#### **3.1. The Data**

This research focuses on the global landscape of MFIs as its primary subject of investigation. With a worldwide presence exceeding 10,000, these MFIs play a pivotal role in delivering essential financial services to individuals lacking access to conventional banking facilities, primarily aimed at poverty alleviation. The reach of this study extends across the 193 member countries encompassing the UN. The data from the “Microfinance Information Exchange (MIX)” database has been taken. This repository provides an expansive collection of information encompassing 3,081 distinct MFIs spread across eight diverse geographical regions, spanning the timeframe from 2000 to 2018. For this research endeavor, a meticulously curated dataset consisting of 1,295 MFIs from 102 nations representing a variety of global regions has been selected. The inclusion of specific MFI data within this study is contingent upon rigorous data quality and availability evaluation. To ensure robustness, the study capitalizes on the entire dataset available from the MIX platform, spanning 2009 to 2018. This temporal scope facilitates a comprehensive exploration of the relationship between gender dynamics and LS outcomes in MFIs.

The rationale behind choosing the data period from 2009 to 2018 in this study is supported by various solid justifications. The selected timeline allows for a thorough analysis of the worldwide microfinance industry, including a span of almost twenty years, and provides substantial research data. This study examines the microfinance sector's significant historical events and regulatory changes. It offers unique insights into the evolution of gender dynamics and their impact on LS. Furthermore, the rationale behind employing the MIX database in this research is sound, as it offers comprehensive data on 3,081 distinct MFIs spanning eight geographically diverse regions. The extensive dataset range guarantees the inclusion of many worldwide situations, enhancing the study's relevance and potential for generalization.

The selection process places significant emphasis on the concept of robustness, underscored by carefully considering data quality and availability criteria. This research aims to conduct a thorough analysis of the relationship between gender dynamics and LS outcomes in the context of MFIs by utilizing the whole dataset available on the MIX platform during the specified time period. This study offers a comprehensive and enlightening investigation into this complex relationship.

#### **3.2. Variables**

The dependent variable under study is LS, while the independent variables encompass WEP, WF, GD, TM and female OTR. A comprehensive understanding of these variables is provided in Table 1, offering a detailed and thorough description of each within the study context.



**Table 1: Measurement of Variables**

Variable	Measurement	Reference
<b>Dependent Variable</b>		
Loan Size (LS)	Natural log (average gross loan/average number of active borrowers).	Memon et al. (2022)
<b>Independent Variables</b>		
Women Echelon Position (WEP)	WEP is measured using an index of the following three components through principal component analysis (PCA): i) % of women as board members; ii) % of women as managers; iii) % of women as loan officer.	Bannò et al. (2023) Memon et al. (2022)
Women Focus (WF)	The ratio of women borrowers to men: It takes a value of '1' if women borrowers are above average, '0' otherwise.	D'Espallier et al., (2013)
Gender Diversity (GD)	Ratio of total women to total men at a MFI using a dummy variable.	Pedrini et al. (2016)
Female Outreach (OTR)	It takes the value of '1' if the number of female borrowers <10000; '0.25' if the number of female borrowers is between 10001-16666; and '0.50' if the number of female borrowers is between 16667-23332; '0.75' if the number of female borrowers is between 23333-30000; '1' if the number of female borrowers > 30000.	Bezboruah and Pillai (2013)
Target Market (TM)	$TM = \text{Depth} = \text{average loan balance per borrower} \div \text{gross national income per capita}$ .	Bezboruah and Pillai (2013)

### 3.3. The Method

Previous research studies used regression techniques to examine the association between independent and dependent variables. These techniques assume a linear and symmetric relationship between the variables. However, it has been observed that, in many cases, the relationship between the predictors and outcome is non-linear and asymmetric. Furthermore, the correlation coefficient encompasses both symmetric and asymmetric relationships. According to Woodside (2013), a correlation above 0.80 signifies a symmetric association, while a correlation between 0.30 and 0.70 indicates an asymmetric relation. In the study, it is common to observe a lower correlation coefficient of 0.70. Hence, it may be argued that the correlation coefficient fails to accurately represent the actual outcome in cases with a non-linear and asymmetric association between the dependent and independent variables (Woodside, 2013). Consequently, researchers endeavored to identify a novel analytical approach as an alternative to address the limitations and inherent challenges associated with regression-based techniques. The data analysis technique is called *fuzzy set quantitative comparative analysis (fsQCA)* (Woodside, 2013). The foundation of fsQCA is rooted in set theory, a mathematical framework that elucidates the essential and complete requirements between various combinations of inputs and their corresponding outputs (Ragin, 2009).

#### 3.3.1. Data Calibration

Initially, all sources of variability are transformed into sets. These sets characterize the degree of membership of a given variable to a specified category. According to Woodside and Zhang (2013), the sets can encompass a range of values between 0 and 1. The calibration of variabilities within a set can be done unambiguously. This involves categorizing the variability as belonging or not to a specific category, represented by binary values of '0' "for non-membership" and '1' "for membership." Alternatively, variabilities can be expressed as fuzzy values, exhibiting different degrees of belonging within a range of "0 to 1" (Skarmear et al., 2014).

In fsQCA, employing three specific limit values for calibration is standard practice. These values include "0.05 (non-belonging), 0.50 (maximum ambiguity) and 0.95 (full membership)" inside the set (Ragin, 2014). The responsibility for determining the technique for assigning fuzzy values to the cases of belonging and selecting threshold values lies with

the researcher. In contrast, the procedure must be transparent and replicable by others (Ragin, 2000). The calibration approach in this study was carried out using the direct method described by Ragin (2008). This study embraced specific percentiles (95<sup>th</sup>, 50<sup>th</sup>, and 5<sup>th</sup>) to define certain thresholds.

### 3.3.2. Truth Table Construction

The primary objective of generating a truth table is to ascertain the precise groupings of criteria within the cases examined that yield the expected conclusion. The truth table includes rows that correspond to  $2^n$ , where  $n$  denotes the number of circumstances being examined (Ragin, 2009). It displays all possible conditions' combinations along with related results (see Table 2).

**Table 2: Truth Table**

WEP	WF	GD	OTR	TM	number	LS	raw consist.	PRI consist.	SYM consist
0	0	1	1	1	22	1	0.9834	0.9313	0.9313
1	0	1	0	1	47	1	0.9820	0.9483	0.9483
0	0	1	0	1	39	1	0.9811	0.9468	0.9477
1	0	1	1	1	18	1	0.9807	0.9104	0.9104
0	1	1	1	1	19	1	0.9786	0.9075	0.9075
1	0	0	0	1	47	1	0.9784	0.9351	0.9351
0	0	0	0	1	45	1	0.9779	0.9340	0.9362
1	0	0	1	1	19	1	0.9771	0.8875	0.8875
0	0	0	1	1	18	1	0.9753	0.8875	0.8875
1	1	0	1	1	16	1	0.9752	0.8346	0.8346
0	1	0	1	1	27	1	0.9749	0.8514	0.8556
0	1	0	0	1	15	1	0.9722	0.8784	0.8784
1	1	1	1	1	22	1	0.9722	0.8699	0.8699
0	1	1	0	1	19	1	0.9715	0.9033	0.9033
1	1	0	0	1	8	1	0.9707	0.8576	0.8576
1	1	1	0	1	28	1	0.9686	0.8943	0.8943
0	0	1	1	0	20	1	0.8444	0.3981	0.3987
1	0	0	1	0	14	1	0.8375	0.3517	0.3517
1	0	1	1	0	15	1	0.8372	0.3676	0.3676
0	1	0	1	0	56	1	0.8270	0.2772	0.2835
0	0	0	1	0	25	1	0.8247	0.3358	0.3368
0	1	0	0	0	14	1	0.8146	0.3342	0.3362
1	1	0	1	0	53	1	0.8143	0.2274	0.2321
0	1	1	1	0	45	1	0.8051	0.3271	0.3291
1	1	0	0	0	25	1	0.8018	0.3020	0.3039
1	0	1	0	0	47	0	0.7911	0.4441	0.4474
1	0	0	0	0	44	0	0.7908	0.4249	0.4272
1	1	1	1	0	48	0	0.7887	0.2714	0.2730
0	0	1	0	0	44	0	0.7861	0.4379	0.4452
1	1	1	0	0	38	0	0.7788	0.3415	0.3439
0	1	1	0	0	34	0	0.7716	0.3403	0.3440
0	0	0	0	0	56	0	0.7574	0.3714	0.3754

Notably, the inclusion criteria for the combinations required them to have at least one case, resulting in 32 combinations meeting this criterion (Table 2). However, it should be noted that the cases linked to various combinations can exhibit variations (Fiss, 2011). The present study analyzed to identify several potential combinations and afterward developed a truth

table to represent the outcomes of the analyzed cases and situations. According to Schneider and Wagemann (2012), combinations having a consistency score below 0.8 are typically omitted in fsQCA analysis. Following this, the truth table undergoes a refinement process where combinations that do not satisfy these requirements are eliminated.

The fsQCA technique employs Boolean algebra and algorithms to facilitate the logical reduction of several arbitrary conditions. The outcome comprises a collection of configurations associated with the effect (Fiss, 2011). The truth table construction technique produces multiple potential answers, subsequently subjected to contrasting analysis for evaluation (Ragin, 2014). As a result, it is possible to identify the primary elements and peripheral linkages between the causes and outcomes (Ragin, 2008). The primary connections pertain to the fundamental factors that exhibit a significant causal association with the outcome. In contrast, the peripheral connections are extraneous or substitutable since they demonstrate a lesser causal link to the outcome (Fiss, 2011).

#### 4. Results and Discussion

##### 4.1. Necessary Conditions Analysis

Afore proceeding with the successive fsQCA phase, entailing the formulation of a truth table, it is imperative to inspect the probable necessities of the “causal conditions” thoroughly. Within the framework of fsQCA analysis, the interpretation of outcomes hinges upon the principles of consistency. A condition is classified as necessary when its consistency value surpasses the threshold of 0.90 (Schneider and Wagemann, 2012; Ullah et al., 2023). The considerations surrounding the necessity of the five conditions (WEP, WF, GD, OTR and TM) about the desired outcome (LS) are delineated in Table 3. The outcomes of this investigation divulge that all five individual conditions are optional, lacking a requisite status for attaining the outcome (LS). This discernment implies that “only a subset of the scrutinized conditions will consistently manifest across all configurations leading to the desired outcome.”

**Table 3: Analysis of Necessary Conditions**

Conditions Tested	Consistency	Coverage
WEP	0.6185	0.6703
~WEP	0.6834	0.6289
WF	0.6099	0.5842
~WF	0.6397	0.6626
GD	0.6489	0.6699
~GD	0.6544	0.6288
OTR	0.5316	0.6657
~OTR	0.7762	0.6410
TM	0.7216	0.9603
~TM	0.6332	0.5033

(~) absence of a condition

##### 4.2. Sufficient Conditions Analysis

The fsQCA findings associated with the LS of MFIs are briefly presented in Table 4. These outcomes are systematically categorized based on the fundamental core conditions, wherein each distinct combination within a particular solution contributes to explaining the outcome to a certain extent. The respective consistency values corresponding to each solution are also precisely detailed in Table 4, all surpassing the established significance threshold value

(>0.75). The metric of consistency serves to quantify the accuracy of the approximated relationships. At the same time, the concept of coverage evaluates the empirical pertinence of a consistent subset within the analysis framework. Of noteworthy significance, the aggregate measure of overall consistency, akin to the concept of correlation, demonstrates the robustness inherent in the presented solutions. Furthermore, the comprehensive coverage of solutions, analogous to the interpretation of the R-square value in traditional regression analyses, stands at 0.83. This figure inherently signifies that the four identified solutions collectively account for a substantial proportion, precisely 83%, of the observed outcome.

**Table 4: Analysis of Sufficient Conditions for Loan Size (LS)**

Input Variable	Solution-1	Solution-2	Solution-3	Solution-4
Target Market (TM)	●			
Women Focus (WF)		●	⊗	
Gender Diversity (GD)		⊗		
Outreach (OTR)			●	●
Women Echelon Position (WEP)				⊗
Raw Coverage	0.7216	0.4602	0.3267	0.4282
Unique Coverage	0.2374	0.0286	0.0047	0.0114
Consistency	0.9604	0.7694	0.7896	0.7625
Overall Solution Coverage	0.8335			
Overall Solution Consistency	0.7171			

Note: ● = “presence of core condition”; ⊗ = “absence of core condition”; Blank Space= “Do not care.”

Furthermore, within the framework of fsQCA, the evaluation of empirical significance for each solution is undertaken through the computation of both “*unique and raw coverages*”. The metric of raw coverage serves to quantify the extent to which a specific alternative solution contributes to the explication of the observed outcome. In contrast, the metric of unique coverage delineates the proportion of the outcome exclusively expounded upon by a particular alternative solution. In the context of our study, it is discerned that all configurations exhibit a raw coverage value exceeding zero, thus affirming their empirical relevance within the analytical framework. In the specific context of MFIs' success in achieving the desired outcome (LS), the elucidated solutions denoted as “Solution-1 through Solution-4” encompass an array of diverse combinations. These combinations pertain to the presence or absence of the various examined factors, contingent upon the intricate interplay of their interactions within the MFIs context.

#### 4.2.1. Solution-1 (S1)

In S1 of Table 4, the TM is a core condition and is present. This indicates that the TM is more likely to contribute to the increase in LS. Therefore, H<sub>5</sub> is supported. This particular solution describes the LS of MFIs at a rate of 72.16%. The findings suggest that the TM component is more likely to impact increasing LS in the context of MFIs significantly. This finding sparks

a debate concerning the observed association and its potential ramifications. The result supports the findings of prior researchers (Caudill, 2009; Bezboruah and Pillai, 2013).

The importance of TM in affecting the financial dynamics of MFIs is highlighted by its significance as a contributor to the increase in LS. The TM denotes the specific demographic or segment to which a MFI caters, and its importance is most likely attributable to elements such as demand patterns, socio-economic features, and market trends within that specific segment (Bezboruah and Pillai, 2013). The conclusion is consistent with MFIs' strategy focus on personalizing their financial products and services to effectively meet the requirements and ambitions of their targeted TM. A thorough understanding of the target market's needs and preferences enables MFIs to create loan packages that resonate with the clients, facilitating improved loan uptake and, as a result, contributing to larger LS. This link between TM and LS increase is consistent with the underlying principles of microfinance, where customized financial solutions frequently result in superior outcomes for both customers and institutions (Gutierrez-Goiria et al., 2017)

#### **4.2.2 Solution-2 (S2)**

Within S2 of Table 4, it becomes evident that WF serves as a core condition. Its presence within this context signifies that an emphasis on women leads to an augmentation in LS. Consequently, this observation validates H<sub>2</sub>. Furthermore, in the same solution (S2), the core condition of GD is notably absent. This absence underscores the specific significance of the women-focused approach for MFIs, particularly in instances where the supportive role of GD remains to be determined. Yet, the objective remains the enhancement of LS. The holistic framework of this solution imparts an explication of the LS of MFIs, achieving a rate of 46.02%. Our findings are supported by the prior scholars (D'Espallier et al., 2013; Abdullah and Quayes, 2016; Ahmad et al., 2014).

Prioritizing a women-focused (WF) strategy inside MFIs is connected with a higher possibility of positively affecting LS. This conclusion calls for a thorough investigation of the subtle processes underlying this link. The broader backdrop of gender dynamics and women's critical role in the microfinance sector are essential considerations. Women-focused policies frequently include initiatives that economically empower women by providing them access to financial services, training, and assistance with income-generating activities (Nyarko, 2022). As more empowered women pursue entrepreneurial endeavors, economic activity rises, creating a greater demand for financial resources. As women become more active contributors to economic growth, this association may lead to more excellent LS (Blanco-Oliver, 2023).

Furthermore, women-focused policies recognize women's distinct financial requirements and preferences in different economies. MFIs can acquire many female consumers by designing financial products that meet these unique needs. This increased demand may result in larger LS as women borrowers seek financial solutions tailored to their situations (Mukendi and Manda, 2022).

Notably, female microfinance borrowers' demonstrated positive repayment behavior helps reduce default risks for MFIs. Because of this positive track record, MFIs can make more significant loans to women because the possibility of repayment stays higher (Tahir et al., 2015). This alignment of repayment behavior with women-focused tactics can give MFIs the confidence to offer more outstanding loan sums, encouraging growth in this dimension. Furthermore, many MFIs match their objectives with broader development goals, including gender equality and women's empowerment. The incorporation of these concepts has the potential to attract investment and support, allowing MFIs to make more outstanding loans to women clients. This link between financial inclusion and development impact highlights the potential for women-centered policies to influence LS expansion (Chamboko and Guvuriro, 2022).

#### 4.2.3. Solution-3 and 4 (S3 and S4)

In S3 of Table 4, it is apparent that the core condition of outreach (OTR) holds a pivotal status. Its presence within this analytical framework signifies a direct association, wherein an emphasis on outreach leads to a consequential increase in LS. As a result, H<sub>4</sub> is validated. Moreover, within S3, the core condition of WF is notably absent. This absence underscores that OTR is specifically necessary for MFIs with unclear support of WF to enhance LS. The S3 yields a notable explanatory efficacy with regard to LS, achieving a rate of 32.67%. Thus, the findings are similar to the past studies (Memon et al., 2022; Hermes et al., 2013; Bassem, 2012).

In S4, the focus on OTR emerges as a central factor, with its core presence indicating a positive impact on enhancing LS for MFIs. Furthermore, in this solution (S4), the core condition of WEP is absent. This absence underscores the importance of emphasizing OTR for MFIs, especially in cases where the supportive influence of WEP on enhancing LS remains uncertain. Overall, S4 sheds light on the patterns governing MFIs, revealing that a higher emphasis on female OTR contributes to a more considerable explanation of LS, with an efficacy rate of 42.82%.

Female OTR inside MFIs is associated with a higher possibility of positively impacting LS expansion. The understanding of the critical role that female outreach plays in advancing financial inclusion among women is at the heart of this result, particularly in societies where women have historically had limited access to financial resources (Guðjónsson, 2022). By prioritizing female outreach, MFIs connect with a group that has frequently been underserved, if not marginalized, in traditional financial institutions. This emphasis recognizes the distinct financial demands, goals, and limits that women may have, spurring the development of personalized financial goods and services (Khalaf et al., 2023). Women's empowerment through financial inclusion is one significant component leading to the observed relation. Female clients are better positioned to engage in entrepreneurial endeavors, income-generating activities, and company enterprises as they acquire access to financial tools. This economic engagement leads to increased demand for financial assistance, which can lead to bigger LS as women take advantage of these possibilities to fulfill their financial goals (Dhungana et al., 2023).

Furthermore, female outreach is consistent with the more significant goals of gender equality and women's empowerment. This alignment aligns with cultural norms and garners support from stakeholders who recognize the excellent impact of financial empowerment for women (Datta and Sahu, 2023). This external assistance can help MFIs allocate resources to make larger loans to women, increasing their economic involvement and amplifying their influence on LS expansion. The positive link between female outreach and LS growth can also be due to female borrowers' favorable repayment behavior. According to research, women frequently have more excellent payback rates, resulting in lower default risks for MFIs (Murdiati, 2023). This strong track record increases MFIs' confidence in issuing larger loans to female consumers, further strengthening the link between female outreach and LS expansion. Recognizing that the relationship between female outreach and LS growth is part of a larger picture is critical. Cultural conventions, legislative frameworks, and the target market's specific needs can all impact the effectiveness of female outreach tactics (Murdiati, 2023).

#### 4.2.4 The Best Solution

Conclusively, S1 is the most significant of the four solutions, with higher “raw coverage and greater relevance than the other solutions” in elucidating the LS of MFIs. Furthermore, TM, OTR, and WF are present in at least one solution (supporting H<sub>2</sub>, H<sub>4</sub>, and H<sub>5</sub>). However, WEP and GD are absent in any of the four solutions (rejecting H<sub>1</sub> and H<sub>3</sub>). The research revealed a noteworthy finding on the relationship between WEP and its limited influence on LS in the context of MFIs (Bannò, 2023). Although there is potential for women's leadership

roles to influence the dynamics of LS, empirical analysis reveals that there is no statistically significant correlation between these variables. This discovery necessitates a more in-depth examination of the correlation between WEP and the magnitude of loans within the framework of MFIs. One possible explanation for the negligible connection could be the complex interplay of several elements that influence the decision-making process regarding LS within MFIs. The potential rise in women's access to larger loans due to occupying higher positions can be anticipated. Observing a purported absence of a substantial influence of GD on LS inside MFIs presents a thought-provoking perspective. Unlike the potential favorable impact of diverse gender composition on LS, empirical analysis indicates otherwise (Johannes et al., 2022). One interpretation suggests that although GD holds significance in shaping the general dynamics of an organization, its direct impact on LS may be subject to modification by several additional factors. Thus, it is essential to consider that various other factors, including market demand, institutional rules, and borrower demographics, may influence the relationship of WEP and GD with LS. These extra variables have the potential to complicate the correlations above. The results emphasize the complex array of factors that impact the number of loans in MFIs and underscore the necessity for a more comprehensive understanding of the larger ecosystem that shapes lending dynamics inside MFIs.

## **5. Conclusion**

This study addressed a critical gap in our understanding of the dynamics within MFIs concerning women's presence at various echelon positions and their involvement, notably evaluating their impact on LS. The study's findings shed light on the interaction of variables and their configurations that improve MFI outcomes. The global pursuit of the SDGs, notably in gender equality and women's empowerment, has highlighted the importance of women's economic involvement. Recognizing the critical role that MFIs play in encouraging inclusive economic growth and poverty alleviation, this study investigated how women's participation in different positions within MFIs affects LS. This research highlighted the subtle relationships between various gender dynamics and LS granted by MFIs. The study's findings, distilled into four configurational solutions, gave fascinating insights into the circumstances under which numerous factors interact to determine LS in MFIs. Notably, core conditions such as TM, WF and female OTR were identified as critical drivers of LS outcomes in various configurations. The implications of WF were particularly noteworthy, indicating that a concerted effort to prioritize women's engagement can significantly contribute to increased LS in MFIs, amplifying the institutions' effectiveness in promoting equitable economic growth. While examining different configurations, the study identified Solution 1 as a crucial finding, highlighting its high raw coverage and more vital relevance in explaining LS outcomes compared to other solutions. In conclusion, this study adds vital insights to the continuing debate on gender equality, women's empowerment, and inclusive economic development. It explains how women's representation in various echelon positions and their involvement collectively influence LS by explaining the interdependencies of variables within MFIs. The study's findings have policy implications, program design, and resource allocation consequences, providing a roadmap to improve the inclusivity and efficacy of microfinance practices on a global scale. As the world works to accomplish the SDGs and promote gender equality, the findings of this study serve as a foundation for establishing a more equitable and prosperous future through empowered women and effective microfinance operations.

### **5.1. Theoretical Contribution**

The theoretical significance of this study can be understood by applying the resource dependency theory, which suggests that organizations deliberately handle their external

relationships to obtain essential resources for their success and goal attainment. In this study, the application of resource dependency theory aids in comprehending the importance of GD and the presence of women in MFIs as strategic assets that influence the outcomes of LS. The study's results align with resource dependency theory since they demonstrate that different configurations of resources have diverse effects on the LS within MFIs. The recognition of the TM as a fundamental requirement emphasizes the importance of comprehending and addressing the distinct financial requirements of the specific market segment. This statement is consistent with the argument put out by the theory, which suggests that organizations need to adjust and accommodate the needs and preferences of their resource suppliers, specifically in this context, the clients. By strategically aligning their services with the specific needs and preferences of the target market, MFIs can effectively attract a consistent pool of borrowers, which in turn has the potential to increase LS. Furthermore, the prioritization of WF as a fundamental factor aligns with the theory's emphasis on the diversification of resources. In this scenario, directing attention toward female clientele emerges as a strategic asset for MFIs. By acknowledging and addressing the distinct financial needs of women, MFIs have the potential to foster a more varied clientele, hence diminishing reliance on one demographic. The process of diversification has the potential to result in more significant loan amounts as the institution gains access to a broader range of prospective borrowers. The exclusion of WEP and GD from the fundamental criteria and the notable relevance of female OTR highlights the necessity of obtaining external resources in the shape of a more extensive business. By actively involving women clients and enhancing their outreach initiatives, MFIs can address the potential risks of needing GD within their internal hierarchies. This study contributes to our comprehension of the strategic utilization of gender-related dynamics as resources inside MFIs by employing the resource dependency theory's theoretical framework. By successfully structuring these resources, MFIs can optimize their LS and promote more inclusive and sustainable operations, harmonizing with resource reliance principles and strategic management.

## **5.2. Policy Implications**

Our findings offer several implications. In practice, the emphasis on the relevance of TM in driving LS provides a clear guideline for MFIs to strategically customize their services to fit their target audience's unique requirements and aspirations. Recognizing the heterogeneous nature of their client base, MFIs could benefit from a more fragmented understanding of their target demographics, allowing them to craft tailored financial products and services that align with the population's specific goals and income-generating activities. This strategic alignment may result in increased loan demand and higher loan payback rates as loans become more tailored to the borrowers' financial conditions and objectives. This conclusion emphasizes the necessity of comprehensive market research and client-centric practices inside MFIs. MFIs may establish a virtuous cycle of increased LS, greater client happiness, and sustainable development by investing in thorough market analysis and actively engaging with the target market to understand their financial needs, behaviors, and preferences. Furthermore, identifying the TM as a critical requirement implies that efforts to broaden the MFI's reach and efficiently tap into new market groups should be supported by a thorough understanding of the prospective clients. This finding should also be considered by policymakers in the microfinance sector. Creating an environment encouraging targeted financial inclusion initiatives can be critical in encouraging MFI expansion. Policies and laws that promote financial literacy, ease of access to financial services, and targeted interventions for specific populations can improve the effectiveness and impact of microfinance operations, ultimately leading to greater economic empowerment and growth.

From a practical perspective, the recognition of WF as a fundamental factor underscores the possibility of directing attention toward financial products and services that cater specifically



to women to augment loan amounts in MFIs. This finding emphasizes MFIs' need to customize their services to effectively meet their female customers' financial needs and aspirations. By recognizing and addressing the specific requirements of female borrowers, MFIs have the potential to stimulate greater demand for loans. This, in turn, can lead to more significant loan amounts and ultimately enhance socio-economic results. From a managerial perspective, this finding underscores the significance of developing business models that are responsive to gender inside MFIs. Implementing targeted financial literacy programs and training initiatives tailored to women borrowers can enhance their financial capacities, increasing the probability of loan acquisition and payback. In addition, establishing supportive mechanisms, such as mentorship networks and platforms for information exchange, can create a conducive atmosphere for the success of women entrepreneurs. This could potentially enhance the LS and overall impact of MFIs. The lack of inclusion of GD as a fundamental requirement, along with the emphasis on WF, implies that although it is crucial to prioritize the financial empowerment of women, MFIs may not necessarily depend on a diverse representation at all levels of the hierarchy to attain the observed growth in LS. Nevertheless, it is imperative to emphasize the need to adopt a reflective methodology. MFIs must assess their commitment to promoting GD and guarantee that their operational procedures are congruent with cultivating an inclusive and diverse atmosphere.

The elevation of female OTR as a core condition highlights the strategic significance of customizing outreach initiatives to cater specifically to female clients. To leverage this finding, MFIs should allocate resources towards focused marketing initiatives and engagement programs tailored to women borrowers. MFIs have the potential to enhance loan demand and increase LS by catering to the distinct financial requirements and ambitions of women entrepreneurs and borrowers. This can be achieved through the establishment of rapport, the cultivation of trust, and the provision of tailored financial services. From a managerial standpoint, this finding highlights the importance of implementing dedicated teams and allocating resources to support outreach programs targeted toward women. Implementing training programs aimed at equipping female loan officers and personnel with gender-sensitive communication skills has the potential to bolster client engagement and rapport-building, resulting in increased efficacy in LS. In addition, cultivating collaborations with women's organizations and networks can facilitate the expansion of MFIs and establish relationships with prospective female borrowers. This, in turn, can enhance the effectiveness of female OTR initiatives. The lack of WEP and WF as fundamental criteria, along with the prevalence of female OTR, indicates that the latter's contribution to the growth of LS is especially noteworthy in MFIs where explicit backing for women's representation and gender-focused initiatives may be ambiguous. Therefore, MFIs must prioritize and effectively convey its dedication to gender inclusivity, establishing a solid basis for female OTR's success.

### **5.3. Limitations and Future Directions**

Similar to previous research, this study also encounters several constraints. The study's utilization of configurational analysis may constrain the establishment of direct causal connections between variables. Future studies may include longitudinal studies or experimental designs to more comprehensively investigate the causal linkages between gender dynamics and LS. Besides, the research primarily concentrated on a distinct collection of gender-related variables, neglecting to include other potential contextual factors that may influence the results. Cultural norms, regulatory environments, and geographical location may significantly influence the interactions being examined. A more extensive examination of these issues would yield a more holistic comprehension of the intricate dynamics in operation. The lack of women in high-ranking positions and the limited representation of gender diversity in the fundamental aspects of the configurational solutions give rise to

thought-provoking inquiries on their potential impacts, warranting additional investigation. Further research could explore excluding these variables to reveal the underlying causes and consequences for organizational results.

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