EMPLOYEE TURNOVER, EFFICIENCY WAGE, GENDER DIVERSITY, AND THE CREDIT RISK OF THE MICROFINANCE INSTITUTIONS: A GLOBAL EVIDENCE

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TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

LIST OF APPENDICES

PEROLEHAN PEKERJA, GAJI KECEKAPAN, KEPELBAGAIAN JANTINA DAN RISIKO KREDIT INSTITUSI KEWANGAN MIKRO: BUKTI GLOBAL

ABSTRAK

Dalam dunia persaingan masa kini, risiko kredit merupakan kebimbangan serius bagi institusi pinjaman seperti institusi mikro kewangan (MFI) kerana kesannya terhadap kelestarian institusi dan kewangan mereka. Risiko kredit kekal sebagai isu penting yang memerlukan perhatian berterusan daripada pembuat dasar, pengamal, dan pihak berkuasa kawal selia MFI untuk membangunkan strategi dan dasar bagi mengurangkannya. Oleh itu, mengambil kira pendekatan hubungan pinjaman MFI yang membezakannya daripada bank komersial, kajian ini memberi tumpuan eksklusif kepada tiga aspek penting iaitu kadar pusing ganti pekerja, gaji kecekapan, dan kepelbagaian jantina (di peringkat lembaga pengarah dan pegawai pinjaman) serta kesannya terhadap risiko kredit MFI. Empat teori asas diterokai dalam kajian ini bagi membangunkan hubungan antara konstruk yang dikaji. Data daripada kira-kira 1,260 MFI unik dari enam wilayah global, yang dikumpulkan melalui pangkalan data Bank Dunia (Mix-Market) untuk tempoh 2010 hingga 2018, digunakan dalam kajian ini. Dengan menggunakan alat ekonomi ekonometri seperti Pooled Ordinary Least Squares (POLS), Fixed Effects Model (FEM), dan Random Effects Model (REM), kajian ini mendapati bahawa kadar pusing ganti pekerja mempunyai hubungan positif dengan risiko kredit MFI. Ini menunjukkan bahawa pembuat dasar perlu menekankan pengekalan pekerja sedia ada bagi memanfaatkan modal sosial mereka atau hubungan amanah dengan peminjam untuk mengurangkan risiko kredit. Tambahan pula, kajian ini mendapati bahawa Institusi Kewangan

Mikro (MFI) harus menawarkan lebih daripada purata industri atau gaji kecekapan kepada pekerja bagi mengurangkan risiko kredit MFI. Mengenai kepelbagaian jantina di peringkat lembaga pengarah, kajian ini menyimpulkan bahawa untuk mendapatkan manfaat kehadiran pengarah wanita dalam mengurangkan risiko kredit, mesti terdapat jumlah kritikal atau kehadiran sekurang-kurangnya dua pengarah wanita dalam pengurusan tertinggi MFI. Selain itu, kepelbagaian jantina di kalangan pegawai pinjaman meningkatkan jumlah peminjam wanita dan seterusnya mengurangkan risiko kredit MFI. Bagi memastikan keputusan adalah bebas daripada ketidakselarasan dalaman, kajian ini menggunakan beberapa teknik pembetulan ketidakselarasan seperti kaedah dua peringkat generalisasi kuasa dua terkecil (G2SLS), kaedah Hausman-Taylor, dan teknik kemungkinan maksimum maklumat terhad (LIML) yang mengesahkan bahawa keputusan kekal teguh dan konsisten. Oleh itu, hasil kajian ini menyumbang kepada bidang akademik serta memberikan implikasi praktikal kepada pembuat dasar, pihak berkuasa kawal selia, dan pengurusan organisasi dalam menangani risiko kredit dengan menekankan dimensi hubungan pinjaman MFI, khususnya aspek kadar pusing ganti pekerja, gaji kecekapan, dan kepelbagaian jantina dalam tenaga kerja.

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ABSTRACT

In today's competitive world, credit risk is a serious concern for lending institutions such as microfinance institutions (MFIs) due to its impact on their institutional and financial viability. As such credit risk remains a valid problem for the policymakers, practitioners and regulatory authority of the MFIs which needs continuous evaluation and further investigation to develop strategy and policy to reduce it. Consequently, considering the significance of relational lending approach of MFIs which distinguishes them from commercial banks, this study exclusively focuses on three crucial aspects such as employee turnover rates, efficiency wage, and gender diversity (board and loan officer's level) and their impact on the credit risk of the MFIs. Four underpinning theories were explored in this study to develop the relationships between the constructs. The study utilized data of 1260 (approx.) unique MFIs from six different regions globally which were collected from the World Bank (Mix-market) databases for the period of 2010 to 2018. Utilizing extensive econometric tools such as Pooled Ordinary Least Squares (POLS), Fixed Effects Model (FEM) and Random Effects Model (REM) and this study found that employee turnover is positively associated with the credit risk of MFIs. This indicates that policymakers should emphasize on retaining existing employees to utilize their social capital or trustworthy relationship with the borrowers to minimize the credit risk. Furthermore, this study realized that MFIs should offer more than the industry average or efficiency wage towards the employees to reduce the credit risk

of the MFIs. In addition to that, regarding board level gender diversity, this study infers that to acquire the benefit of presence of female board member to reduce credit risk, there must be a critical mass or presence of two or more than two female board members in the top-level management of the MFIs. Apart from that, this study further concludes that gender diversity at loan officers' level causes to increase the female borrowers and thus reduces the credit risk of the MFIs. Furthermore, to confirm the results are free from endogeneity, this study implemented several endogeneity corrected techniques such as two-stage generalized least square (G2SLS) method, Hausman-Taylor method and limited information maximum likelihood (LIML) techniques and confirms that the result remains robust and consistent. Therefore, the outcome of this study contributes to the academia as well as provides several practical implications for the policymakers, regulatory authorities, and the organizations' management to deal with the credit risk by emphasizing on the relational lending dimension of the MFIs particularly focusing on employee turnover, efficiency wage and gender diversity (board and loan officers' level) in the workforce.

CHAPTER 1 INTRODUCTION

This chapter introduces a general overview of the research. It describes the background of the study, explains the motivation, highlights the problem statement, develops the research questions, formulates the research objectives, emphasizes the expected contribution, and depicts the organization of the research.

1.1 Background of the Study

Microfinance has been hailed as one of the significant tools for poverty alleviation, entrepreneurship promotion, and socio-economic development in developing countries since the mid-1980s. Initially, the objective of such banking creation was to serve the underprivileged rural populations, who do not have access to the conventional banking system. Due to the tangible effects of microfinance on the poor and the unbanked, the program has been expanded to over 120 countries and received donations and subsidies from many governments, donor agencies, and multinational development banks (e.g.: African Development Bank and World Bank) to cover part of the operational costs and further expand the microfinance operations (Djan & Mersland, 2021; Hudon & Traca, 2011; M. F. A. Khan, Uddin, & Giessen, 2021; Mia, Ahmed, & Nomon, 2021; Sodhi & Knuckles, 2021).

However, relying on donations to cover the costs or expand operations is not a sustainable business strategy (Pollinger, Outhwaite, & Cordero-Guzmán, 2007; Quayes, 2012). Therefore, another objective of microfinance institutions (MFIs) emerged, that is, achieving operational and financial self-sufficiency through improved financial performance, also called financial sustainability. Therefore, most modern MFIs are now faced with two (dual) objectives, namely, social outreach and

financial sustainability (Armendariz & Labie, 2011). In another word, MFIs have to achieve their social outreach goal by providing financial services to the unbanked and poorer members of society, and simultaneously, generating sufficient revenue to cover their operating costs (Bharti & Malik, 2021; Nourani, Malim, & Mia, 2021; Rana, Banna, Mia, Ismail, & Ismail, 2021). Consequently, academics, practitioners, and policymakers are attempting to find out the factors that affect the dual goals of MFIs (Hermes & Hudon, 2018).

A voluminous number of empirical literatures has investigated the factors affecting either one or the dual goals of MFIs. For example, age (Cull, Demirgu¨ ç-Kunt, & Morduch, 2007; Suarez & Lanzolla, 2007; Wu, Escalante, & Li, 2016), size (Armendáriz & Morduch, 2010; Gohar & Batool, 2015), ownership status (A. Khan, Ahmad, & Shireen, 2021; Piot-Lepetit & Tchakoute Tchuigoua, 2021), gender (C. Ghosh & Guha, 2019; T. Hasan, Quayes, & Khalily, 2019), efficiency (Annim, 2012; Fall, Akim, & Wassongma, 2018), governance (Bassem, 2009; Hartarska, 2005), (Ashta & Fall, 2012; Rasel & Win, 2020), etc., have been extensively studied to see how they affect the social outreach and financial sustainability objectives of MFIs during the last few decades. Apart from internal factors or organizational characteristics, studies also suggested that the performance of MFIs is also affected by country-level and macroeconomic environmental factors (Ashta & Fall, 2012; S. Xu, Copestake, & Peng, 2016). However, the major concern among academics in the last few decades is to minimize risk which might affect the overall financial performance of MFIs. MFIs are suffering from different kinds of risks such as financial risk, operational risk, strategic risk, so and so forth. Among these variety of risks, credit risk is the most significant one (Blanco-Oliver, Reguera-Alvarado, &

Veronesi, 2021; Zamore, Beisland, & Mersland, 2019). Moreover, MFIs are not immune to financial crises like other banking institutions are, since the subprime crisis exposed MFIs to a greater risk due to lending to risky borrowers (Lassoued, 2017a). Financial crises have indeed dried up financing sources and increased microentrepreneurs' levels of excessive debt. Therefore, risk management seems to be an essential step for MFIs in order to exnsure economic viability while achieving their social objectives. For example, During the subprime crisis of 2007–2009, global financial systems faced significant disruptions due to widespread lending to subprime borrowers—individuals with poor creditworthiness. While MFIs were not directly involved in subprime mortgage lending, their focus on high-risk clients mirrored the vulnerabilities seen in subprime lending. Economic downturns triggered by financial crises disproportionately affect the low-income populations that MFIs serve, leading to increased loan defaults. Borrowers' dependent on unstable incomes were among the first to experience financial distress during the subprime crisis, making it challenging for MFIs to sustain their operations. Moreover, the group lending model often employed by MFIs—where borrowers rely on community trust and mutual accountability—becomes less effective during widespread economic stress, as entire communities may face financial difficulties simultaneously.

In contrast, traditional banking institutions have a broader clientele that includes individuals and businesses with more stable financial profiles. Banks also tend to lend larger amounts, often secured by collateral such as real estate or business assets. However, during the subprime crisis, banks directly engaged in originating and holding subprime mortgage loans, which defaulted at alarming rates. Their

reliance on complex financial instruments like mortgage-backed securities and derivatives further amplified the crisis, causing systemic financial disruptions.

Another distinction lies in risk mitigation. MFIs rely on social capital, frequent repayment schedules, and smaller loan sizes to manage risks, whereas traditional banks use credit scoring, collateral, and regulatory safeguards to assess and mitigate credit risk. While banks are subject to stricter regulatory oversight, especially in developed economies, MFIs often operate in environments with limited regulatory frameworks, making them more vulnerable to external shocks.

The subprime crisis revealed that both MFIs and banking institutions are susceptible to financial disruptions, though the mechanisms of their exposure differ. For MFIs, the crisis underscored the importance of diversifying client bases, strengthening financial reserves, and adopting robust risk management practices. For traditional banks, it highlighted the dangers of speculative lending and insufficient oversight in financial markets. Ultimately, the crisis emphasized the interconnected nature of financial systems and the need for tailored strategies to enhance the resilience of both MFIs and traditional banks in the face of economic challenges.

Furthermore, the risks that MFIs face are so diverse and dynamic that there appears to be no universally accepted risk taxonomy. In general, MFIs suffer from different types of risk, such as credit risk, portfolio risk, liquidity risk, strategic risk, operational risk, etc. (Zamore et al., 2019). However, among all the risk, MFIs mostly suffers from credit risk due to their dependence on credit-related products and services (Armendariz & Labie, 2011). As MFI's revenue largely depends on the

credit provided to its clients, the failure of borrowers to repay their loans tends to shrink the profit and financial sustainability of MFIs. Therefore, credit risk is considered to have a significant negative impact on the profitability of banking financial institutions (Fang & van Lelyveld, 2014), including MFIs.

In today's competitive world, credit risk, also known as default risk, is a serious concern for lending institutions such as microfinance institutions (MFIs) due to its impact on their institutional and financial viability. Microcredit defaults are putting the microfinance business in jeopardy. For example, the high frequency of loan defaults in Bolivia's microfinance industry from 1996 to 2000 impacted the industry as well as the entire economy (Vogelgesang, 2003). Furthermore, MFIs are more vulnerable to credit risk than banks due to the shorter maturity (one year or less) of their credit (Zamore et al., 2019). Moreover, the payment of the loans is scheduled on a weekly or monthly basis. This means that if MFI borrowers skip one or two instalments, the overall credit risk of the MFI would shoot up. It is also suggested that defaulter breeds defaulter, meaning that if a few borrowers fail to repay on time, it may alter the payment patterns of other borrowers (Bond & Rai, 2009), particularly in a group lending settings. Moreover, the credit risk of MFIs is always high, as their credit policy supports the provision of collateral-free loans (Ibtissem & Bouri, 2013). Therefore, to guarantee the long-term sustainability of MFIs, it is crucial to concentrate on credit risk reduction strategies and policies. Moreover, evaluating the factors and practices that influence the credit risk for MFIs appears to be a critical step in ensuring financial sustainability in the long run.

Reflecting on the credit system of MFIs, one can observe an interesting scenario. As opposed to the clients of commercial banks, clients of MFIs rarely go to a branch office to apply for a loan. Rather, it is the MFI loan officers who frequently visit potential customers' homes and engage them. This one-on-one communication fosters a personal relationship with the loan officers who, as a result, enjoy exclusive access to all of the clients' soft information (Uzzi & Lancaster, 2003). Collecting information about the clients by developing relationships for the lending purpose and deciding whether the loan should be provided or not is termed “relational lending” (Berger & Udell, 2002). Most MFIs use this relational lending approach at the time of providing credit to the borrowers (Boot & Thakor, 2000). Usually, managers of the MFIs use loan officers to collect the information by developing relationships from the customer’s place. Thus, loan officers play a pivotal role in ensuring the timely recovery of loans (Sangwan, Nayak, Harshita, & Sangwan, 2021). Moreover, loans provided by MFIs to customers are, most times, not backed by physical collateral, thus warranting that employees maintain a close and trustworthy relationship with the borrowers to foster loan recovery. Therefore, the loan repayment behaviour of borrowers is significantly influenced by the close relationship and supervisory capacities of MFI’s loan officers. Moreover, microfinance loan repayment rates hinge more on borrowers’ enforcement and monitoring by employees than on quantitative risk evaluation techniques (i.e., projections of future cash flow) commonly employed in the banking industry. Therefore, emphasizing strategies that enhance the efficient supervision and loan collection capabilities of employees from the “relational lending” perspective is essential for the long-term sustainability of MFIs.

Henceforth, from the relational lending perspective, the credit risk of MFIs could be worsened by the voluntary or involuntary departure of loan officers possessing soft information about credit customers (Berg, Puri, & Rocholl, 2013; Stein, 2002). This mechanism of voluntary or involuntary departure of existing employee is defined as "employee turnover". As employees of the MFIs are closely linked with the borrower's credit repayment system according to relational lending approach, henceforth, employee turnover can affect the credit risk of the MFIs. From two dimensions' employees can affect the credit risk of MFIs. First, as employees directly communicate with their customers, therefore, they can monitor, supervise, and guide their clients regarding the utilization of credited funds as well as generate enough cash flow to repay the loan accordingly (Sangwan, Nayak, & Samanta, 2020). Second, employees possess the soft personal information of the clients, and they facilitate customers' needs and services whenever necessary. For that reason, a trustworthy relationship gradually develops between employees and borrowers of MFIs. To maintain a trustworthy social-personal relationship with the loan officers, clients experience the urge to repay the loan on a timely basis (Maîtrot, 2019). From both dimensions, it can be realized that employees of the MFIs (e.g.: loan officers) can serve as a tool for influencing the repayment patterns of the borrowers as such, mitigating the credit risk of the MFIs. However, this mechanism becomes futile when those employees leave the MFIs which is denoted as employee turnover. The trend of employee turnover for global MFIs from 2010 to 2018 is presented in Figure 1.1.

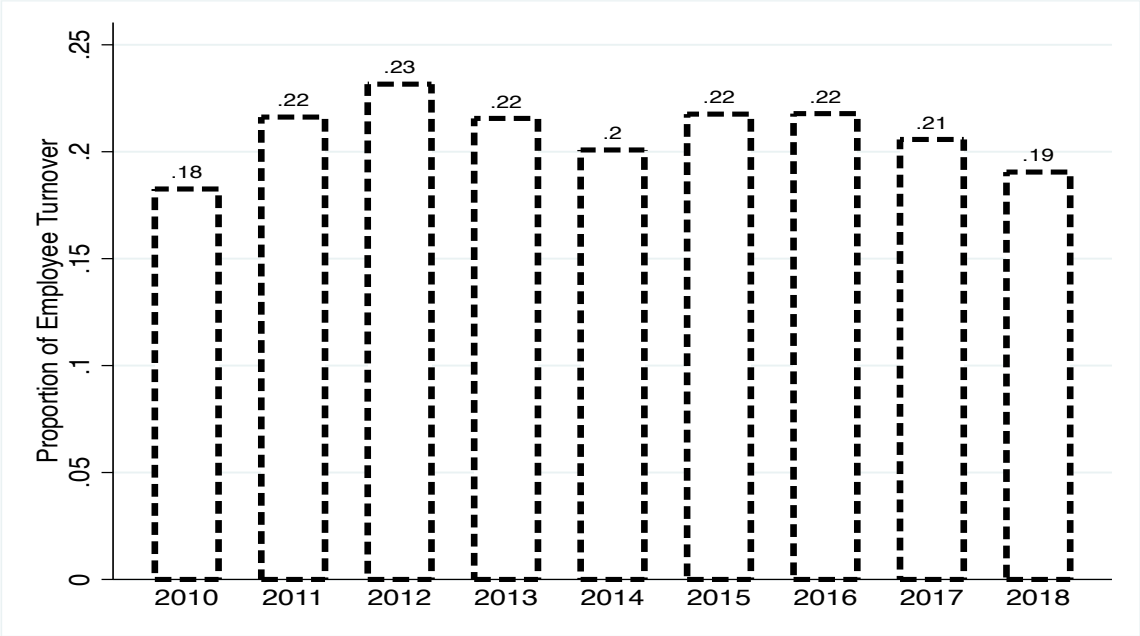

Figure 1.1 Trend of Employee Turnover in MFIs Globally.

Source: Author's estimation. Note: Data were collected from the World Bank Mix Market database.

From the Figure 1.1, it is indicated that the employee turnover is approximately 20%. Even though in the existing literature no specific benchmark for employee turnover is found. However, several researchers quantify this rate as highest compared to banking industry (Giuliano, Godfroid, & Radermecker, 2023; Mia, Jibir, & Omeke, 2023; Nourani, Mia, Saifullah, & Ahmad, 2021). For example, according to Nagarajah and Shanmugam (2022), the highest employee turnover observed in Malaysian banking sector is 18.6% whereas in microfinance industry the recent employee turnover observed as 20% (approximately). On the other hand, according to (Mia et al., 2023) argues that in recent times employee turnover is high enough to rethink its impact on the performance of MFIs. Furthermore, the author explains that, since employee turnover is associated with negative psychological and economic effects, it is a key problem for organizations, especially MFIs. Due of its direct impact on business performance, it has garnered a lot of attention lately.

It is critical to investigate how employee turnover affects MFI's credit risk, because the loan repayment of the borrower is largely influenced by the loan officers' close monitoring of the borrowers (Blanco-Oliver et al., 2021). Therefore, employee turnover might promote borrowers' patronage of new MFIs for further loan services while neglecting the payment of the previous loans (Drexler & Schoar, 2014). This in turn will result in high-repayment problems and increase the credit risks of MFIs. Therefore, further investigation is warranted regarding the impact of employee turnover on the credit risk of MFIs.

Retaining current employees comes with a variety of advantages. For an instance, any corporation or institution's revenue is primarily determined by its personnel. A large and productive workforce can assist a business or organization being viable in the marketplace by producing enough income to meet expenses. Furthermore, from the relational lending approach, employees possess soft information about the client base and maintain inter-personal relationships with them which gives the privileges of better loan performance in terms of payment or recovery for the MFIs. However, the opposite scenario observes when that employee leaves the organization voluntarily.

To preserve the existing employees, several studies tried to determine the factors or strategies that might affect employee turnover. Among others, it is observed that, employee participation in the decision-making (Benn, Teo, & Martin, 2015; Khalid & Nawab, 2018); better communication within the organization (Erickson, 2015; Prasetyo et al., 2021); better compensation package (Syahreza,

Lumbanraja, Dalimunthe, & Absah, 2017); HRM practices (Bibi, Ahmad, & Majid, 2018); leadership and better working environment (Ohunakin, Adeniji, Oludayo, Osibanjo, & Oduyoye, 2019; Tian et al., 2020); and job satisfaction influences (Baik & Zierler, 2019; De Sousa Sabbagha, Ledimo, & Martins, 2018; Nezhina, Barabashev, Prokofiev, & Utkina, 2021) can reduce employee turnover. However, among all the factors that might cause employee turnover, motivation is the most significant one (Bouwmeester et al., 2019; Morrell & Abston, 2018; Woolford, Joyce, & Polacsek, 2022). For motivating employees, several theories have evolved, however, it is believed that financial or monetary benefit can provide prompt motivation instead of appreciation (Palma, Trimi, & Hong, 2019).

In this context, this study argue that implementing an efficiency wage—a salary above the market average—can be an effective strategy to encourage employees to remain dedicated and put forth their best effort (Mankiw, 2020). When employees receive compensation that aligns with or exceeds industry standards, they are incentivized to perform their duty with greater dedication, sincerity, and honesty (Forson, Ofosu-Dwamena, Opoku, & Adjavon, 2021; Leete, 2000). Furthermore, agency theory suggests that equitable compensation discourages employees from seeking opportunities elsewhere and keeps them motivated to work toward achieving the firm's objectives (Yamamoto, 2011). In such cases, employees are expected to perform their duties diligently, including effective monitoring or supervision of loan clients. Past research, such as that by Hartungi (2007), also states that a well-trained, well-compensated, and well-managed workforce can benefit the organization. Therefore, this study argue that offering salaries exceeding industry averages, referred to as efficiency wages, can significantly influence the credit risk in MFIs.

The significance of efficiency wages can be understood from three key aspects. First, according to Stiglitz (1976), employee productivity is a function of their earnings. This implies that an efficiency wage can increase labor productivity, potentially resulting in work output twice as efficient as that of employees receiving less than the industry average wage. Second, apart from improving employee productivity, the implementation of efficiency wages can foster stronger employee-borrower relationships (Mia, Banna, Noman, Alam, & Rana, 2022). Furthermore, according to Aubert, de Janvry, and Sadoulet (2009), credit agents should be sufficiently incentivized because they play a pivotal role in the development of the MFIs they represent. Without proper incentives, they may lack the motivation to thoroughly assess potential borrowers, accurately report repayments, and provide reliable borrower data. Third, higher wages can boost employee morale, loyalty to the organization, and overall productivity (Akerlof, 1982). Consequently, well-compensated employees tend to be more risk-averse when extending credit to borrowers. Ultimately, if MFIs provide their employees with incentives exceeding the industry average, this could have a substantial impact on the credit risk of the institution.

The trend of average wages over gross national income (GNI) per capita in the microfinance industry globally is shown in Figure 1.2. From the figure, it is observed that every regions pays average wages more than the GNI per capita of the country. Furthermore, among all the regions, it is observed that in the Africa the payments are highest. However, it is worthy to note that, average wages over GNI need not to be considered as efficiency wage because according to the definition of

the efficiency wage, Solow (1979) argues that efficiency wage is an "increased wage that improves morale and thus directly affects productivity through an increase in worker effort". Moreover, Lawrence F Katz (1986) defines efficiency wage as "the payment of non-competitive wage premiums relates to the presence of unions or threat of collective action by the worker". Therefore, this study estimated efficiency wage by comparing industry average wage of a country in a year [details of the estimation method of efficiency wage is provided in section 3.5.3(b)]. Based on the estimation process followed to calculate efficiency wage by combining individuals' efficiency and industry average, the efficiency wage of the global microfinance industry is shown in Figure 1.3. From the Figure 1.3, it is observed that most of the country provide wages below the industry average wage to the employee of the MFIs. It is worthy to note that the benchmark of the efficiency wage is the industry average wage of that individual country which can be varied from one country to another.

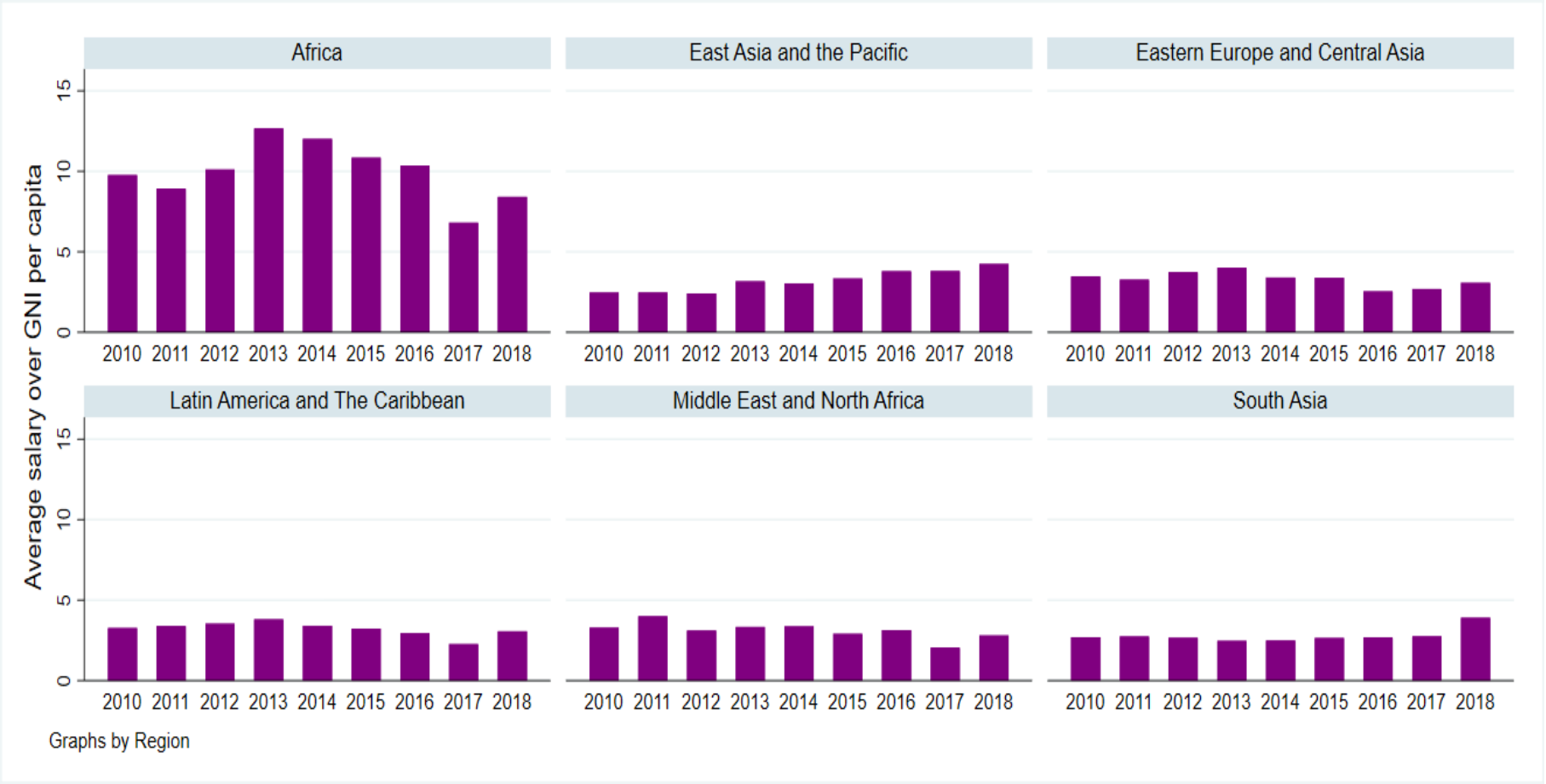

Figure 1.2 Trend of Average Salary over GNI per Capita in MFIs Globally.

Source: Author based on the World Bank-MIX Market data.
Note: GNI = Gross National Income

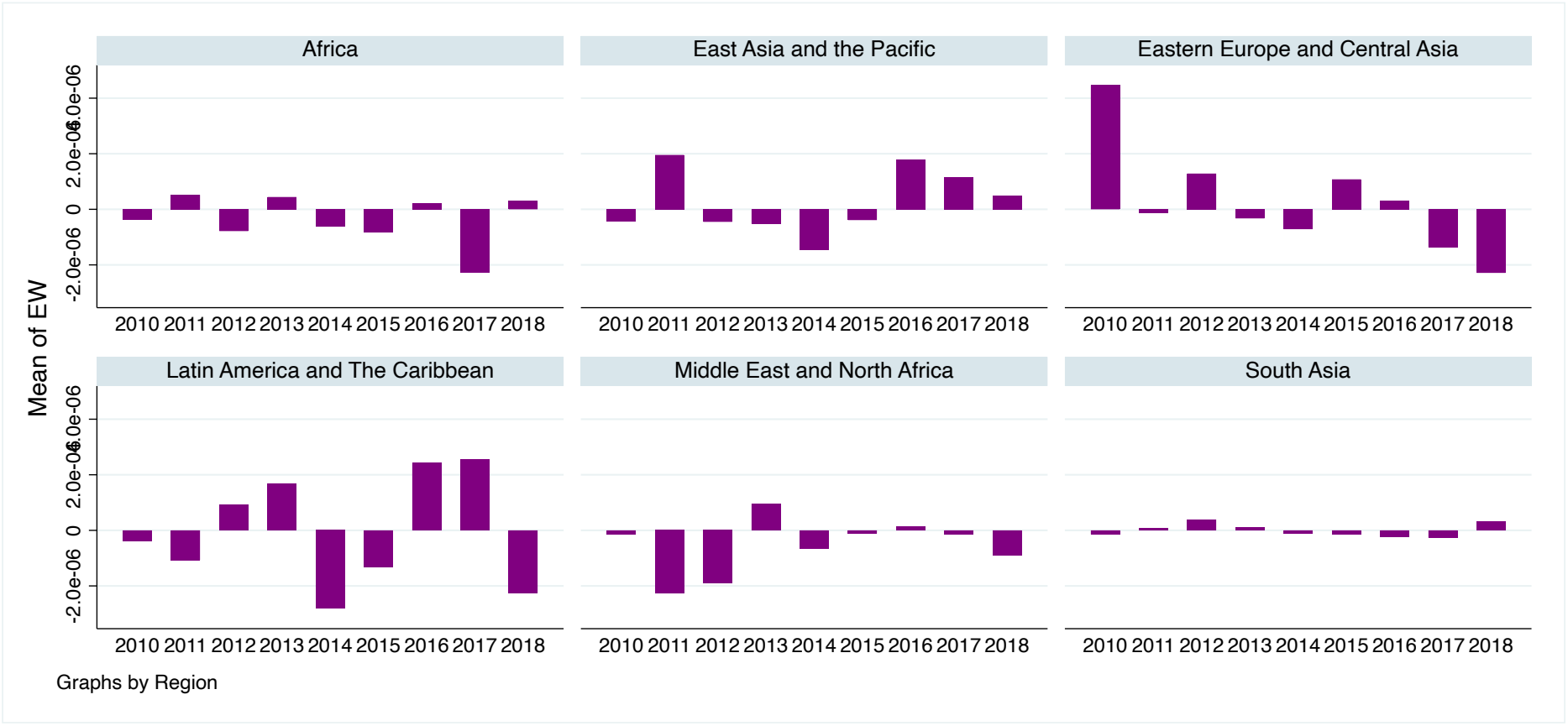

Figure 1.3 Trend of Efficiency Wage in MFIs Globally.

Source: Author based on the World Bank-MIX Market data.

Apart from that, after going through the previous literature related to MFIs, it is observed that studying gender-related issues is drastically important in recent years for several reasons. First, gender equality is the fifth of the United Nations' Sustainable Development Goals (SDGs), which should be accomplished in every aspect, including the corporate and microfinance industry. This indicates that the workforce diversity should be equal or 50-50 in all the organization. However, according to the sustainable development goals report (2023)[1], in 2021, women made up about 40% of the workforce globally, but they only held 28.2% of management jobs. Thus, gender diversity in the workforce remains a crucial concern for the researchers. Furthermore, from the microfinance context, Adusei, Akomea, and Poku (2017) confirms that only if 50% or more of their management teams and boards are composed of female members, then the MFIs are more likely to reap the benefits of gender diversity at the board and management levels. Unfortunately, only around 25-40% of the workforce in MFIs are female (See Figure 1.4).

[1] Sustainable development Goals Report 2023 can be extracted from the following link: https://unstats.un.org/sdgs/report/2023/

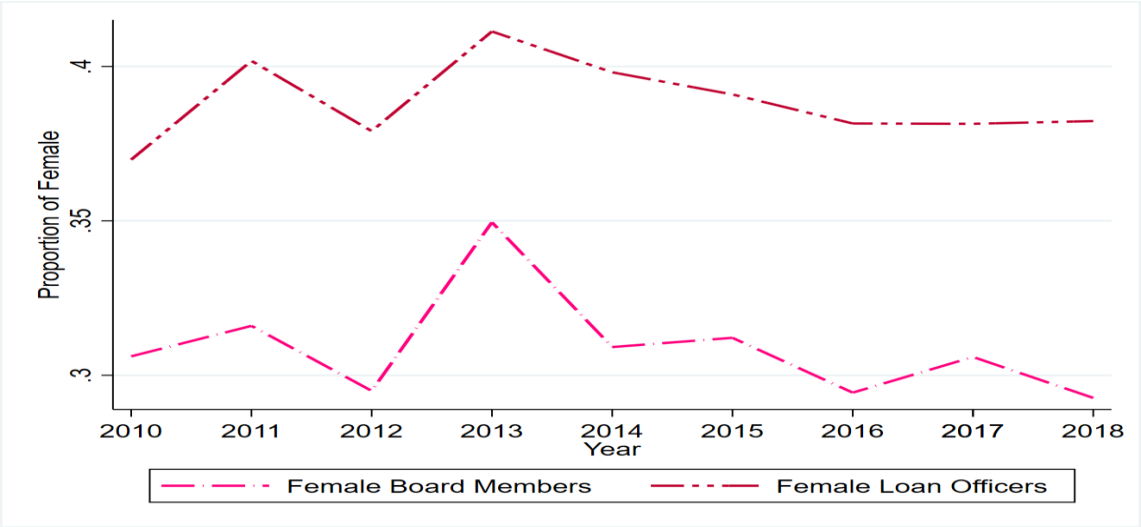

Figure 1.4 Trend of Gender Diversity in the Microfinance Workforce.

Source: Author based on the World Bank-MIX Market data.
Note: Each of the gender diversity variables was winsorized at 1% levels to take care of the extreme outliers. The trend in earlier years might be affected by the smaller number of observations available to draw the graph.

Generally, the board of directors performs three main tasks: they provide companies with access to important resources and pertinent information, offer management advice on setting the firm's strategy, and oversee management activities on behalf of external stakeholders (Åberg, Bankewitz, & Knockaert, 2019). Furthermore, a gender-diverse board can help reduce portfolio credit risk in two ways. Firstly, the behavior literature often argues that female board members are more risk-averse than their male counterparts, which may hurt credit risk (Kinateder, Choudhury, Zaman, Scagnelli, & Sohel, 2021). Secondly, having female board members can enhance the supervisory and monitoring capacity of the board (Pucheta-Martínez, Bel-Oms, & Olcina-Sempere, 2019; Vitolla, Raimo, & Rubino, 2020), which can lead to greater transparency and less risky investments.

Consequently, several studies have investigated the impact of board gender diversity on performance (Boubacar, 2020; Vishwakarma, 2017), sustainability (Memon, Akram, & Abbas, 2020), institutional quality and capital structure (Adusei & Sarpong-Danquah, 2021), social performance (Périlleux & Szafarz, 2015), environmental performance (Birindelli, Iannuzzi, & Savioli, 2019), and governance (Adams & Ferreira, 2009) in the financial sector, including banks and MFIs. However, less attention has been paid to the potential impact of gender diversity at the board level on the portfolio risk of MFIs.

While having a gender-diverse board can potentially reduce portfolio risk, this benefit is not automatic and may depend on the proportion of female board members compared to their male counterparts. If the percentage of female board members is not sufficient to have their voices heard during decision-making processes, the benefit of gender diversity may not be attained (Adusei et al., 2017). As such, it is essential to establish a "critical mass" or a certain threshold of female board members to influence overall decision-making effectively (Shahab, Ntim, Ullah, Yugang, & Ye, 2020). A critical mass of female directors is known to provide women leaders with more organizational support, including peer and mentorship relationships and access to specialist networks that strengthen decision-makers' ability to adopt novel and creative changes and foster innovation in leadership. This support has been established in the literature (Adusei et al., 2017).

Meanwhile, it has been reported that more than 60% of active borrowers of MFIs in most developing nations are female (Lemire, 2020). Besides, female employees are

more likely to understand the needs of female borrowers (Todd, 2021). Therefore, communicating with female borrowers becomes easier when the loan officer is female. Hence, from the relational lending perspective, it is argued that a proportionate number of female personnel in the MFI is essential to serve a large female client base.

Second, in some developing countries, it has been discovered that, due to social and cultural concerns, female borrowers may feel uncomfortable in the presence of a male loan officer and thus abstain from using various MFIs services. Therefore, communicating with female borrowers becomes easier when the loan officer is female. Thus, a female employee of the MFIs not only affects the social outreach goal by increasing female credit clients, rather they can affect the loan repayment pattern of those female borrowers. According to Emilio M Santandreu, Lopez Pascual, and Cruz Rambaud (2020) female borrowers of MFIs in the USA are more responsible credit clients in terms of timely repayment of loan instalments than men. However, microfinance loan officers must do additional duties beyond their advisory ones, such as debt collection from borrowers (Siwale & Ritchie, 2012). This intrigues the opportunity to use female employees or loan officers as a significant tool to influence the loan repayment model of female borrowers to reduce the credit risk of the MFIs.

Overall gender diversity in the workforce (board and loan officers' level) remains a trendy area of research from the microfinance context since past few decades. For an instance, some of the previous studies discovered a favourable significant impact of a gender-diverse board of directors on the social performance (breadth of outreach) of MFIs (Hartarska, Nadolnyak, & Mersland, 2014; Mori, Golesorkhi, Randøy, & Hermes,

2015), however, not on the financial performance goal of MFIs' (C. Ghosh & Guha, 2019). Yet, other studies have found that gender diversity on boards of directors has a positive impact on MFIs' financial performance (Strøm, D'Espallier, & Mersland, 2014; Thrikawala, Locke, & Reddy, 2017; Vishwakarma, 2017). Additionally, the presence of female employees or a gender-diverse workforce may have varying effects on the MFIs' financial and social outreach goals depending on which ladder of the workforce is being investigated. For example, Mia, Dalla Pellegrina, and Wong (2021) found that gender diversity at the management (top-management team), managerial (mid-level), and loan officer (staff or field) levels have varying effects (positive and negative) on the financial performance of MFIs. Although few studies have attempted to establish the association between gender diversity and MFI performance around the world (Adusei et al., 2017; Boehe & Cruz, 2013; C. Ghosh & Guha, 2019), their findings were largely mixed. Based on this prior empirical evidence it is found that gender diversity among the employee has a significant impact on the social as well as the financial performance of the MFIs. However, it is yet to be found whether gender diversity at the organizational level (board level and loan officer level) can affect the credit risk of the MFIs or not?

Therefore, considering the significance of employee turnover, efficiency wage, and employee gender diversity (board and loan officers' level), this research, aims to investigate the role of these factors on the credit risk of the MFIs and support policy and strategies to ensure long-term viability by reducing the credit risk.

1.2 Motivations of the Study

MFIs have been operating for decades, with the specific goal of uplifting the financially excluded rural and low-income people by offering them a variety of financial services (Littlefield, Morduch, & Hashemi, 2003; Mia, 2022a). According to Beisland, Djan, Mersland, and Randøy (2021), microfinance is a type of social enterprise that offers financial services to individuals and small businesses that are economically underprivileged. MFIs provide different types of services which include, saving, credit, micro insurance, payment services, money transfers, etc. towards the poor unbaked population of society and foster the well-being of those people. Since its inception, the idea of using microfinance as an effective measure to combat poverty has exploded around the world (Abdallah Ali, Mughal, & Chhorn, 2022; Garikipati, 2017; Quinones & Remenyi, 2014; Toindepi, 2016). The microfinance sector has experienced rapid expansion both in terms of the size of the global market covering more than 100 countries and the number of MFIs surpassing 3000 throughout the world offering these services [2]. Microfinance has had remarkable development in terms of product offerings, loan portfolio, payback rate, and financial viability. Its significance and beneficial societal effects for rural and unbanked marginal economic people are now widely acknowledged. However, the major challenge of this industry right now is ensuring long-term sustainability. Without which neither the first SDG, eradicating poverty nor the social and economic benefits from this industry can be achieved by 2030. This viewpoint is what first inspired this research to aid MFIs in achieving institutional viability in the long run.

[2] According to Mix-Market database. https://datacatalog.worldbank.org/search/dataset/0038647

As MFIs continue to expand and improve, the literature on MFIs has recently begun to place more emphasis on sustainability. The issue of sustainability can be considered from several dimensions. For example, sustainability in terms of financial solvency to bear all the expenses from the generated revenue is denoted as the financial aspect of sustainability. Several studies argued that MFIs should be self-sufficient both operationally and financially to be sustainable in the long run (Armendariz & Labie, 2011; Githaiga, 2021; Leite, Mendes, & Sacramento, 2019). Similarly, reaching out to the maximum number of poor is also treated as "social outreach" and used as a social aspect of sustainability. The debate among the researchers regarding whether a trade-off exists between financial sustainability and social outreach or not is ongoing (Awaworyi Churchill, 2020; Bassem, 2012; Caserta, Monteleone, & Reito, 2018; Nurmakhanova, Kretzschmar, & Fedhila, 2015). The Institutionalist viewpoint prioritizes the institution's financial stability while also reducing poverty, whereas the Welfarist viewpoint places more emphasis on serving the needs of the underprivileged. Furthermore, another concept of sustainability has emerged recently which is called environmental sustainability. According to this concept, MFIs should be operated in such a way that, they will minimize the harm towards the environment through "green microfinance or green microcredit", to promote environmental sustainability (Allet, 2014; Allet & Hudon, 2015; Huybrechs, Bastiaensen, & Van Hecken, 2019; Uddin, Kassim, Hamdan, Saad, & Embi, 2021).

Among the three aspects of sustainability, the financial aspect of sustainability is gaining more attention due to its importance to guarantee both long-term survivals based on the social and environmental facades. MFIs need to improve their financial

performance (Armendáriz & Morduch, 2010) to sustain their primary goal of serving the poor and unbanked and ultimately, improving the lives of the impoverished (Bergson, 1983; Schreiner, 2002). In other words, a better financial position for MFIs might allow them to increase their client base (also known as the breadth of outreach) and serve the poorest of the poor (also known as depth of outreach) (Hermes, Lensink, & Meesters, 2011).

For the last few decades, institutionalist approach alternatively the commercialization process is gaining attention in the microfinance industry because of two reasons. First, depending upon subsidy distorts the long-term viability of MFIs and encourages those firms to initiate policies and strategies to become financially self-sufficient. Second, it is also observed that without deviating from social outreach goals, it is possible to become financially self-sufficient (Nurmakhanova et al., 2015; Quayes, 2012). However, scholars treat this conversion from non-profit to for-profit orientation as mission drift or deviation from the primary goal of serving the poor people of the society (Armendáriz & Szafarz, 2011; Mia & Lee, 2017; Quayes, 2021). Furthermore, for-profit MFIs are more intended to provide large individual loans rather than the original concept of group lending (D'Espallier, Goedecke, Hudon, & Mersland, 2017; Mersland & Strøm, 2010) which increases the possibility of credit risk (Chikalipah, 2018). Moreover, credit risk is one of the major challenges to achieving the financial sustainability of MFIs. This perspective encourages the author to conduct research regarding factors affecting the credit risk of MFIs.

In microfinance, understanding the factors that influence default risk is a crucial topic of interest among researchers. Several scholars tried to examine the determinants of the credit risk of MFIs, such as; interest rate (Duho, Duho, & Forson, 2021b; Ibtissem & Bouri, 2013; Lassoued, 2017b), governance (Mersland & Strøm, 2009; Tadele, 2020; Tadele, Roberts, & Whiting, 2021a), efficiency (Durango, Lara-Rubio, Galera, & Blanco-Oliver, 2022; Fersi & Boujelbène, 2021a), overconfidence of the manager (Fersi & Boujelbène, 2021c), capital structure (Geresem & Michael, 2021; Tchakoute Tchuigoua, 2015), demographic characteristics of the employee (Mori, Richard40, & Swai41, 2019), loan size (Chikalipah, 2018), regulation (Karimu, Salia, Hussain, & Tingbani, 2021) and etc. Apart from that, very less attention was given to factors that influence the institutional characteristics related to the employees, in light of the relational lending perspective, of the MFIs which might affect the credit risk.

Financial service-providing organizations like MFIs are mostly dependent on their employees. Thus, voluntary turnover or skill transfer within the industry might increase the overall credit risk for the organization. As discussed earlier (1.1 Background of the study), employee turnover leads to borrower turnover (Nourani, Mia, et al., 2021) and distorts the repayment structure of loans. For example, employees or loan officers directly communicate with the borrowers and maintain the bonding until the loan is fully recovered. Therefore, if the employee leaves the organization unexpectedly, sometimes it becomes difficult for the MFI to regenerate the soft information that was possessed by that employee. In addition to that, neither it is possible to replace and maintain the relationship with the existing clients through newly appointed employees. Therefore, in most cases with the movement of the employee,

borrowers tend to move towards new financial institutions (Drexler & Schoar, 2014). As a result, once the employee leaves the MFI, the credit is likely to increase simultaneously. This dimension of employee turnover and credit risk relationship is yet to get adequate research interest among academics. Thus, this perspective gives the motivation to investigate the relationship in the microfinance industry.

According to the past studies "Employees are the lifeblood of any organization" (Das & Baruah, 2013; Patro & Kamakula, 2016), even though crucial decisions are always made by the management of the organization; however, employees are treated as the executioner of the decisions. For example, management decides the payroll or pay structure for the employees of the organization. If the pay structure is standard according to the industry average and efficiency based, employees will do their job with more dedication, sincerity, and honesty (Forson et al., 2021; Leete, 2000). Furthermore, according to agency theory, if an employee is paid commensurately s/he might not look for the opportunity to switch the organization, nor will be demotivated to work for achieving the objectives of the firm (Yamamoto, 2011). In that instance, the employee will do his/her duty and responsibility accordingly and monitor or supervise the loan client. Hence, employees can play a significant role in reducing the credit risk of MFIs. Hartungi (2007) states that a well-trained workforce, well compensation and incentive package for the staff, and a well-managed system with transparency, supervision, and risk management can ensure MFI's sustainability. Hence, there is a possibility that credit risk might be reduced for the MFIs by providing efficient wages to employees. This instigates this research to examine the relationship between credit risk and the efficiency wage of the MFIs.