

## Fostering poverty reduction through ultra-microfinance interventions for agricultural MSEs in Indonesia: The role of business size and gender

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### ABSTRACT

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Studies on the role of gender, family businesses, and non-family businesses in examining financial management practices, particularly in developing countries, have been largely overlooked. This research, based on the collaboration between Positive Accounting Theory (PAT) and Agency Theory, aims to explore the intervention of microfinance in micro and small agricultural enterprises (MSEs). Using a quantitative approach, the study employs the Structural Equation Model Partial Least Square (SEM-PLS) method with a sample size of 656 respondents, comprising ultra-micro and small business actors in the agricultural sector in Indonesia. The findings indicate that for micro-sized businesses, entrepreneurial success mediates the relationship between microfinance and subjective wellbeing, while in small-sized businesses, poverty reduction and entrepreneurial success fully mediate the relationship between ultra-microfinance and subjective wellbeing. Ultra-microfinance assists business owners in enhancing their financial resource capacity more easily. On the other hand, microfinance not only provides financial access but also offers training and mentorship programs, helping business owners achieve long-term success. The study also reveals that gender does not mediate the relationship between microfinance and subjective wellbeing. Gender inequality in accessing resources, differences in decision-making participation, and social norms that still limit women's roles in economic activities within the agricultural sector are contributing factors. The implication of this study is to provide insights for decision-makers in the agricultural MSME sector to enhance subjective wellbeing. It is hoped that poverty alleviation programs through microfinance initiatives, such as PNPM, can be optimally absorbed and have a positive impact on empowering business owners to reduce structural poverty, especially in the key sector of agricultural businesses.

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### 1. Introduction

In recent decades, researchers, public sectors, private sectors, and practitioners in both developed and developing countries have focused on efforts to reduce poverty (Chikwira et al., 2022; Farooq et al., 2024a; Maksimov et al., 2017a; Manzoor et al., 2019a; Nursini, 2020a; Osei & Zhuang, 2020). Poverty is a serious issue faced by many countries, both developed and developing, affecting social, economic, and political aspects (Halleröd & Larsson, 2008). According to Beckerman (2015), poverty can hinder economic growth, leading to reduced employment opportunities due to limited human resource skills. Moreover, an increase in unemployment within a country results in higher social assistance expenditures, thereby increasing the state's financial burden (Quiggin & Mahadevan, 2015). The severe economic consequences of poverty also exacerbate social inequality. Conflict theory (Coser, 1956) explains that sharp social inequality and conflict intensify injustice, trigger political instability, and disrupt social cohesion, which in turn hampers a country's economic development. Furthermore, an empirical study by Moyer et al. (2023) found that by 2070, poverty induced by climate change could affect up to 23.9% of

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the population across 175 countries. In developing countries such as Indonesia, social inequality remains closely linked to high crime rates, with 200 criminal cases recorded per 100,000 people (Sugiharti et al., 2023).

Given the serious impacts of poverty, international researchers have increasingly focused on poverty alleviation efforts within the Micro, Small, and Medium Enterprises (MSMEs) sector (Fiseha & Oyelana, 2015; Maksimov et al., 2017b; Manzoor et al., 2019b; Nursini, 2020b). According to an empirical study by Gherghina et al. (2020a), MSMEs contribute significantly to national economic strength through job creation, increased household income, and serving as a catalyst for societal welfare improvement. In developing countries such as Indonesia, MSMEs play a crucial role as the backbone of the economy, contributing significantly to Gross Domestic Product (GDP) and thus having the potential to boost economic growth and accelerate poverty reduction (Gherghina et al., 2020b). Therefore, research on poverty alleviation through the MSME sector is critical and warrants further exploration. International studies have demonstrated the link between poverty alleviation and microfinance programs. According to an empirical study by Farooq et al. (2024b), microfinance has proven effective in alleviating poverty in Pakistan. Microfinance programs assist business owners in improving financial literacy by offering easy access to financial services, including microcredit, savings, and other financial information services (Ahmed, 2009; Koveos & Randhawa, 2004). According to Hussein Kakembo et al. (2021), microfinance helps small business owners overcome challenges through empowerment systems and financial support, enabling them to expand their enterprises. An empirical study by Arora (2024) found that microfinance contributes to inclusive and sustainable development. Moreover, Hussain et al. (2019) demonstrated the important role of women in poverty alleviation. According to Dema-Moreno (2009), women are often regarded as key financial decision-makers in small businesses, as they typically manage family business budgets. Furthermore, social agency theory posits that women are effective agents of change in social life (Salehi et al., 2020). Moreover, this study also demonstrates the correlation between gender roles, microfinance, and subjective wellbeing (Farooq et al., 2024b). For instance, an empirical study conducted by Olohunlana et al. (2023) in Nigeria shows that female entrepreneurs who utilize microfinance can achieve subjective wellbeing. This is because microfinance is perceived as a tool that enhances women's independence, confidence, and acts as a women's empowerment program to increase social recognition and improve household economic conditions (De Hoop et al., 2014).

This study also explores the relationship between subjective wellbeing and poverty reduction. According to Binder & Coad (2013), entrepreneurs who achieve financial success tend to experience higher life satisfaction compared to those who have not yet attained financial independence. Similarly, empirical studies have shown that subjective wellbeing is influenced by entrepreneurial success. According to Koveos & Randhawa (2004), poverty reduction programs often involve training and access to credit, which fosters the skills of small business owners, enabling them to expand their businesses. Furthermore, international studies have also established the connection between microfinance and business success. For instance, an empirical study by Farooq et al. (2024b) in Pakistan found that microfinance serves as a solution for entrepreneurs to increase financial access. Microfinance provides credit that enables business owners to enhance their financial capacity. Therefore, microfinance is considered a solution for small business owners with limited financial resources (Pollinger et al., 2007), allowing them to grow their enterprises. Previous studies have proven that microfinance effectively strengthens the financial foundations of businesses (Glaubitt et al., 2009; Ullah & Khan, 2017). Additionally, this study explores the role of ownership structure, poverty alleviation, and subjective wellbeing. For instance, research conducted by Su et al. (2021a) in developed countries such as China demonstrates that business ownership structures have distinct characteristics in managing business operations. According to Putritamara, Hartono, et al. (2023a), family businesses possess characteristics of altruism. Family businesses are generally perceived to have a stronger sense of belonging compared to non-family businesses, exhibiting more futuristic management systems (Gu et al., 2019). In contrast, non-family businesses tend to focus on long-term efficiency (Stewart & Hitt, 2012). Both ownership structures can achieve subjective wellbeing through inclusive policies and proper management. However, until now, no studies have specifically examined the role of ownership structure in moderating poverty alleviation and subjective wellbeing.

This study also investigates the link between business success and subjective wellbeing. For instance, a study by Farooq et al. (2024b) in Pakistan shows that business success can be measured by financial achievements, business growth, and increased sales. These factors contribute to increased happiness, life satisfaction, and optimism for long-term business prospects among entrepreneurs. Subjective wellbeing is considered crucial for business owners, alongside financial gain. This is because holistic wellbeing reflects a good balance in life, happiness, and mental resilience, which enables entrepreneurs to be more resilient in the face of business uncertainties (Pathak & Joshi, 2021; Przepiorka, 2017). However, to date, studies related to microfinance, poverty alleviation, business success, and subjective wellbeing among MSME entrepreneurs in agricultural sectors in developing countries have been largely neglected by international researchers, especially in considering the roles of gender and ownership structure as moderating factors. Additionally, no research has yet examined the interconnected model of microfinance, poverty, business success, and subjective wellbeing, alongside the roles of gender and ownership structure as moderators, in exploring the case of MSMEs, particularly with different model testing for micro and small business typologies. Although the study by Farooq et al. (2024b) has demonstrated the link between microfinance, poverty alleviation, business success, and women's inclination toward business success, this research overlooks the potential moderating roles of gender and ownership structure, which could strengthen or weaken the relationships between microfinance and poverty alleviation, microfinance and subjective wellbeing, and poverty alleviation and subjective wellbeing. Similarly, the empirical study by Hussain et al. (2019), which explored the connection between gender, microcredit, and poverty alleviation, used a

quantitative approach with a univariate model. Thus, this study aims to further explore the complexity of microfinance as a poverty alleviation program for agricultural MSMEs. The main challenge for MSMEs in developing countries, especially in the agricultural sector, is financial constraints (Ahmed, 2009; Chikwira et al., 2022; Koveos & Randhawa, 2004; Nursini, 2020b), even though agricultural products significantly contribute to food security and agricultural development (Peck Christen et al., 2005). Furthermore, the crucial role of women in MSMEs, particularly in agricultural products, is to achieve food independence. Women play a critical role as agents of change who support the long-term sustainability of agricultural enterprises (Huang & Nik Azman, 2023).

This study contributes to several important aspects. First, it enriches the existing literature on Positive Accounting Theory and Agency Theory. Second, it adds to the literature that examines subjective wellbeing through the moderating roles of gender and ownership structure. Third, it contributes to the development of agricultural MSMEs as a structural poverty alleviation program, particularly in the typologies of micro and small businesses. Fourth, it informs decision-making and provides input for policymakers, financial sectors, and NGOs on effective programs for poverty alleviation through economic empowerment of small business actors.

## 2. Theoretical background and hypothesis development

### 2.1 *The Relationship Between Microfinance and Poverty Reduction*

The international study conducted by Sen et al. (2023) in Bangladesh empirically demonstrated the role of gender in poverty alleviation. One of the dominant strategies for poverty reduction that women in small businesses can leverage is microfinance (Ayanwale & Alimi, 2004). Empirical studies have shown that microfinance helps entrepreneurs alleviate poverty. Microfinance is considered a program that provides microloans and easy access to financial services for the development of small businesses (Gehlich-Shillabeer, 2008). The empirical study by Nkamnebe & Idemobi (2011) also revealed that with financial assistance, entrepreneurs are able to ensure a steady supply of raw materials, increase production capacity, improve profits, expand marketing reach, and extend operational activities, all of which lead to better income and enhanced product and service quality. Furthermore, a smooth business operational system enables entrepreneurs to enhance their products and services, thereby widening market opportunities. Higher profits often follow improved product quality. Hence, microfinance is considered a practical solution that policymakers can recommend as a strategy for poverty alleviation, particularly with women serving as agents of change (Yu et al., 2020).

**H<sub>1</sub>:** *Microfinance has a positive effect on poverty reduction.*

### 2.2 *The relationship between microfinance and entrepreneurial success*

The relationship between microfinance and entrepreneurial success has been empirically demonstrated by Farooq et al. (2024b) in Pakistan, showing that microfinance is linked to the success of entrepreneurs. Microfinance provides services such as microloans, savings, insurance, and both conventional and digital financial services. Similarly, the findings from Newman et al. (2014) indicate that microfinance is an entrepreneurial empowerment program designed to enhance human resource capacity and capabilities through the mentoring of business financial management systems. International research by Mushtaq & Bruneau (2019) also highlights that microfinance can improve financial inclusion, which in turn drives business economic growth. Therefore, entrepreneurs who can effectively utilize microfinance are more likely to achieve success in their businesses. Unfortunately, the link between microfinance and entrepreneurial success has been largely overlooked by researchers, particularly in the context of MSMEs in agricultural products within developing countries.

**H<sub>2</sub>:** *Microfinance has a positive effect on Entrepreneur Success.*

### 2.3 *The Role of Family Business and Non-Family Business Ownership Structures in Moderating Poverty Reduction and Subjective Wellbeing*

Empirical research conducted by Tang et al. (2021a) in China has shown a link between poverty alleviation and subjective wellbeing. However, no studies have yet explored the moderating role of family and non-family business ownership structures. Family businesses, according to several scholars, tend to possess strong cultural values and a long-term commitment to building business success for economic stability and wellbeing. In contrast, non-family businesses tend to operate more professionally, with a focus on optimizing business resources (Ferreira et al., 2021; López-Pérez et al., 2018; Tang et al., 2021b). Empirical findings by Bertschi-Michel et al. (2020) demonstrate that family businesses generally report higher levels of happiness compared to non-family businesses. This is attributed to the fact that family businesses can achieve life satisfaction more easily. According to Putritamara, Hartono, et al. (2023a), altruism in family businesses creates a stronger sense of belonging compared to non-family businesses. Consequently, when entrepreneurs succeed in building a family's economy through product sales, subjective wellbeing becomes more attainable.

**H<sub>3</sub>:** *Business ownership structure moderates the relationship between poverty reduction and subjective wellbeing.*

#### *2.4 The Relationship Between Entrepreneurial Success and Subjective Wellbeing*

Empirical studies, such as those by Bertschi-Michel et al. (2020), demonstrate a link between entrepreneurial success and subjective wellbeing. Entrepreneurs who achieve financial success are more likely to experience life satisfaction compared to those who have not yet attained financial independence (Binder & Coad, 2013). Additionally, Lindblom et al. (2020) found that successful entrepreneurs tend to have higher confidence and optimism in facing future business changes. For instance, a study by Raza et al. (2023) in Pakistan revealed that financially mature entrepreneurs are more confident in establishing external business collaborations due to their reliable knowledge, experience, and skills (Putritamara, Hariyono, et al., 2023).

**H<sub>4</sub>:** *Entrepreneurial success has a positive effect on subjective wellbeing.*

#### *2.5 The Role of Gender in Moderating the Relationship Between Microfinance and Subjective Wellbeing*

Research conducted by Bhuiyan & Ivlevs (2019) in Bangladesh indicates a link between microfinance and subjective wellbeing. Woldie et al. (2012) explain that microfinance programs aim to build financial independence for small business owners by providing accessible and affordable financial services. However, no studies have yet explored the role of gender in moderating the relationship between microfinance and subjective wellbeing, despite evidence that women exhibit strong flexibility in managing financial resources (Al-Shami et al., 2016; Zulfiqar, 2017). Women, as agents of change within the family, have the potential to improve household economies. Furthermore, Fletschner & Kenney (2014) suggest that women's household spending is typically oriented towards enhancing family wellbeing, including education, health, and supplemental income-generating activities.

**H<sub>5</sub>:** *Gender moderates the relationship between microfinance and subjective wellbeing.*

#### *2.6 The Role of Poverty Reduction in Mediating the Effect of Microfinance on Subjective Wellbeing*

Microfinance, as a financial instrument providing access to financial services for individuals and small businesses excluded from conventional banking systems (Vanroose & D'Espallier, 2013), plays a critical role in poverty reduction. Poverty reduction acts as a mediator that links microfinance to subjective wellbeing, ensuring that the financial benefits obtained from microfinance translate into improved wellbeing for small business owners (Mushtaq & Bruneau, 2019).

**H<sub>6</sub>:** *Poverty reduction mediates the relationship between microfinance and subjective wellbeing.*

#### *2.7 The Role of Entrepreneurial Success in Mediating the Relationship Between Microfinance and Subjective Wellbeing*

Successful entrepreneurs typically possess stronger management skills, the ability to identify opportunities, and resilience in overcoming business challenges (Taleb et al., 2023). Consequently, when an entrepreneur achieves success, they are better positioned to leverage microfinance funds effectively, which in turn enhances their subjective wellbeing (Peck Christen et al., 2005).

**H<sub>7</sub>:** *Entrepreneurial success mediates the relationship between microfinance and subjective wellbeing.*

#### *2.8 The Relationship Between Poverty Reduction and Subjective Wellbeing*

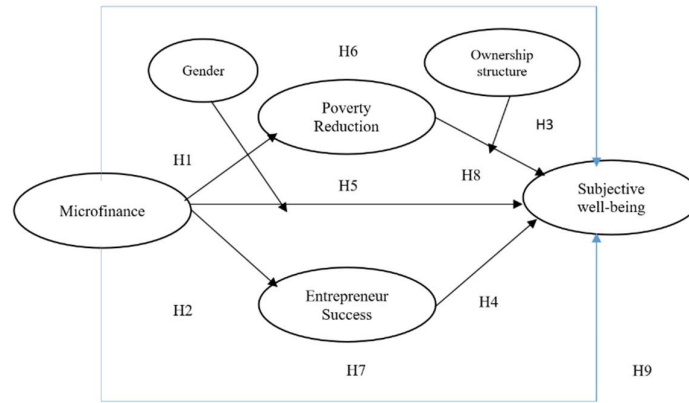
This study also proposes a link between subjective wellbeing and poverty reduction. According to empirical research by Su et al. (2021b), poverty reduction programs often involve empowerment efforts aimed at increasing business capacity, such as training, improving financial literacy, and providing access to credit and other financial services for business development.

**H<sub>8</sub>:** *Poverty reduction has a positive effect on subjective wellbeing.*

#### *2.9 The Relationship Between Microfinance and Subjective Wellbeing*

This study also suggests a connection between microfinance and subjective wellbeing. For instance, an empirical study by Olohunlana et al. (2024) demonstrated that access to microfinance can reduce financial stress and economic uncertainty, which in turn improves individuals' mental and emotional wellbeing.

**H<sub>9</sub>:** *Microfinance has a positive effect on subjective wellbeing.*



**Fig. 1.** Testing the Hypothesis of the Empirical Model Specification of the Role of Poverty Reduction and Entrepreneurial Success in Mediating Microfinance Effects on Subjective Well-Being through Gender Considerations and Ownership Structure

**3. Research method**

*3.1 Measurement of Research Variables*

The variables investigated in this study include microfinance, poverty reduction, entrepreneurial success, subjective wellbeing, and two moderating variables: ownership structure (family business vs. non-family business) and gender. Microfinance, in this study, has four indicators adopted from the empirical findings of Farooq et al. (2024b), which are microloans, micro-savings, insurance, and microcredit. The latent variable of poverty reduction is adopted from the study of Saad et al. (2019), consisting of five indicators within a reflective construct: microfinance mitigates structural poverty, enhances the business ecosystem, increases per capita income, improves the economic conditions of society, offers investment opportunities, and provides business investment ideas. The next latent construct, also reflective, is entrepreneurial success, adopted from Chatterjee et al. (2019a) and Taleb et al. (2023), which includes the following indicators: satisfaction from providing others the opportunity to join the business, owner involvement in the business, business profitability, perceived chances of success, and satisfaction in leading one's own company. The dependent latent variable in this study is subjective wellbeing, which consists of indicators such as job satisfaction, the ability to build good relationships with neighbors, satisfaction with the living environment, and satisfaction with family life (Li et al., 2019; Ozbilen & Akar, 2023; Smedema et al., 2010; Zhao et al., 2023). The measurement instruments for this study use a Likert scale from 1 to 5, where 1 represents “strongly disagree” and 5 represents “strongly agree.”

**Table 1**  
Research Variables

Variable and its indicators
<b>Microfinance</b> (Farooq et al., 2024b) Microloans Micro-savings Microinsurance Microcredit
<b>Poverty reduction</b> (Saad et al., 2019) Microfinance mitigates structural poverty Microfinance enhances the business ecosystem Microfinance increases per capita income Microfinance improves the economic conditions of communities Microfinance provides investment opportunities and offers business investment ideas
<b>Entrepreneurial success</b> (Chatterjee et al., 2019a; Taleb et al., 2023) I am satisfied to have provided opportunities for others to join my venture Owner involvement in the business Profits within the business Opportunities for success that have been realized Being the boss of my own enterprise brings personal satisfaction
<b>Subjective well-being</b> (Ozbilen & Akar, 2023; Smedema et al., 2010; Zhao et al., 2023) I am satisfied with the way my business operates I believe that building relationships with neighbors in rural areas can create harmonious and friendly connections I am satisfied with the environment in my current residence I am satisfied with my overall family life at present So far, I have achieved many important things I desire in my life

### 3.2 Questionnaire Development

The questionnaire was developed based on the research objectives, which include: 1) investigating the direct effects of microfinance on poverty reduction and entrepreneurial success; 2) examining the mediating roles of poverty reduction and entrepreneurial success on subjective well-being; and 3) exploring the moderating role of age of microfinance on subjective well-being and the moderating role of structural ownership of poverty reduction on subjective well-being. This study employs multivariate Structural Equation Modeling (SEM) using Partial Least Squares (PLS), which involves two stages of testing: the outer model to assess the validity of the manifest variables and the inner model to test the relationships among constructs. The study was conducted over three months, from May to August 2024, through surveys administered to 477 microbusiness respondents and 179 small business respondents.

### 3.3 Research Data

The approach utilized in this study is quantitative, employing cross-sectional data from micro, small, and medium enterprises (MSMEs) in the agricultural sector concentrated in East Java, specifically in Banyuwangi Regency, Jember Regency, Surabaya City, Malang Regency, Kediri Regency, Blitar Regency, and Tulungagung Regency. The total number of respondents is 656, comprising 477 micro business respondents and 179 small business respondents. According to Nayati Utami et al. (2019), 60% of MSMEs in Indonesia are concentrated on the island of Java. This study focuses on the agricultural sector as the primary sector in developing countries like Indonesia, facilitated by the PNPM (Program Nasional Pemberdayaan Masyarakat), which aims to assist micro, small, and medium enterprises in improving the quality and quantity of agricultural production. The agricultural businesses included in this study consist of food crops such as rice, corn, chili, coffee, vegetables, and fruits, with a specific focus on the subsector of layer poultry farming. The qualification for respondents in this study includes a minimum farm age of 10 years, as indicated by (Sterman, 2000). This duration is significant as business dynamics can be observed within the first ten years. The study employs survey and structured interview methods using a questionnaire instrument, which is detailed in Table 1.

## 4. Empirical results

Empirically, the results from a survey of 656 food crop farmers and layer chicken breeders concentrated in East Java, identified as the food basket region of Java, were selected purposively and are presented in the following respondent profile

**Table 2**  
Profile of Micro Business Respondents (n=477)

Specification	Item	Number	Specification	Item	Number
Age	<25	17	Education	No education	7
	26-35	227		Primary school	12
	36-45	162		Junior school	65
	46-55	61		Senior school	273
	56-65	10		Graduate	110
Using microfinance	10 years	164	Gender	Postgraduate	10
	11-15 years	303		Male	105
	>15 years	10		Female	372

**Table 2**  
Profile of Respondents from Small Businesses (n=179) (Continued)

Specification	Item	Number	Specification	Item	Number
Age	<25	8	Education	No education	7
	26-35	32		Primary school	12
	36-45	71		Junior school	38
	46-55	61		Senior school	110
	56-65	7		Graduate	10
Using microfinance	10 years	10	Gender	Postgraduate	2
	11-15 years	113		Male	81
	>15 years	56		Female	98

### 4.1 An Examination of Validity and Reliability

Table 3 presents the summary of the validity test for micro and small businesses.

**Table 3**

## Validity Test (Micro Business)

Variables	Construct	Item	Loading (>0.5)	CA (>0.7)	CR (>0.7)	AVE (>0.5)
<b>Ultra-microfinance</b>	Formative			0.880	0.952	0.812
Microloans		X1.1	0.562			
Microsavings		X1.2	0.576			
Microinsurance		X1.3	0.893			
Microcredit		X1.4	0.718			
<b>Poverty Reduction</b>	Reflective			0.614	0.744	0.580
Microfinance mitigates structural poverty.		Y1.1	0.522			
Microfinance has the potential to enhance the business ecosystem.		Y1.2	0.589			
Microfinance can increase per capita income.		Y1.3	0.563			
Microfinance contributes to improving the economic conditions of communities.		Y1.4	0.729			
Microfinance offers opportunities for investment and provides business investment ideas.		Y1.5	0.797			
<b>Entrepreneurial Success</b>	Reflective			0.721	0.817	0.672
I am satisfied to have provided others the opportunity to join my endeavors.		Y2.1	0.675			
The involvement of owners in business is crucial for success.		Y2.2	0.729			
The benefits derived from business ventures contribute significantly to overall profitability.		Y2.3	0.636			
The opportunities for success that have been experienced reinforce the importance of active participation in entrepreneurial activities.		Y2.4	0.745			
Being the boss of one's own enterprise constitutes a source of personal fulfillment.		Y2.5	0.643			
<b>Subjective well being</b>	Reflective					
I am satisfied with the functioning of my business.		Z1	0.728	0.763	0.841	0.701
I believe that building relationships with neighbors in rural areas can foster harmonious and friendly connections.		Z.2	0.722			
I am satisfied with the environment in my current place of residence.		Z3	0.713			
I am satisfied with my overall family life at this moment.		Z4	0.734			
So far, I have gained many important things that I desire in my life.		Z5	0.686			

**Table 3**

## Validity Test (Small Business)

Variables	Construct	Item	Loading (>0.5)	CA (>0.7)	CR (>0.7)	AVE (>0.5)
<b>Ultra-microfinance</b>	Formative			0.624	0.756	0.774
Microloans		X1.1	0.650			
Microsavings		X1.2	0.658			
Microinsurance		X1.3	0.813			
Microcredit		X1.4	0.906			
<b>Poverty Reduction</b>	Reflective			0.797	0.859	0.665
Microfinance mitigates structural poverty.		Y1.1	0.622			
Microfinance has the potential to enhance the business ecosystem.		Y1.2	0.720			
Microfinance can increase per capita income.		Y1.3	0.671			
Microfinance contributes to improving the economic conditions of communities.		Y1.4	0.841			
Microfinance offers opportunities for investment and provides business investment ideas.		Y1.5	0.836			
<b>Entrepreneurial Success</b>	Reflective			0.922	0.941	0.672
I am satisfied to have provided others the opportunity to join my endeavors.		Y2.1	0.812			
The involvement of owners in business is crucial for success.		Y2.2	0.893			
The benefits derived from business ventures contribute significantly to overall profitability.		Y2.3	0.876			
The opportunities for success that have been experienced reinforce the importance of active participation in entrepreneurial activities.		Y2.4	0.917			
Being the boss of one's own enterprise constitutes a source of personal fulfillment.		Y2.5	0.864			
<b>Subjective well being</b>	Reflective			0.797	0.859	0.659
I am satisfied with the functioning of my business.		Z1	0.859			
I believe that building relationships with neighbors in rural areas can foster harmonious and friendly connections.		Z.2	0.906			
I am satisfied with the environment in my current place of residence.		Z3	0.890			
I am satisfied with my overall family life at this moment.		Z4	0.874			
So far, I have gained many important things that I desire in my life.		Z5	0.839			

**4.2 Structural Measurement Model Results**

Based on the results of the inner model testing in the multivariate analysis, the fit value for the micro business model was 0.088, which meets the fit index criterion of 0.10 (Hair Jr et al., 2014). In comparison, the fit value for the small business model was 0.070. The Normed Fit Index (NFI) for the micro business model was 0.699, while the NFI for the small business model was 0.840. According to Kline (2015), an ideal NFI value ranges between 0 and 1.

Additionally, based on the path analysis in the micro business model, subjective wellbeing accounted for 52.5% of the variance in explaining the model. In the small business model, subjective wellbeing explained 78% of the variance in microfinance, poverty reduction, and entrepreneurial success. The following are the structural measurements from the inner model results.

**Table 4**  
Hypothesis Testing for Micro Businesses

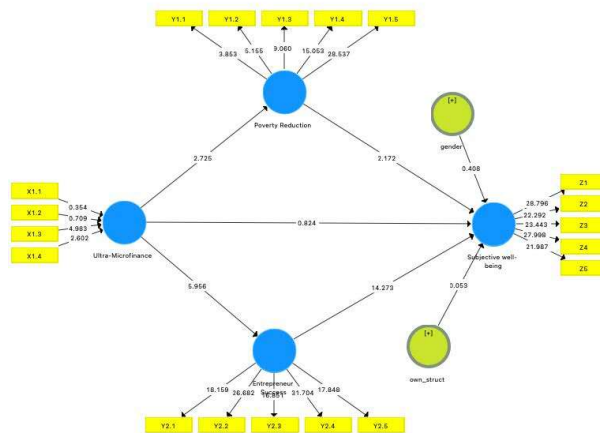
Hypothesis	Relationship	Std. Beta	Std. Error	t-value	p-values	Result
<b>Direct effect</b>						
H1	Microfinance → Poverty Reduction	0.183	0.067	2.725	0.006	Received
H2	Microfinance → Entrepreneur success	0.355	0.060	5.956	0.000	Received
H4	Entrepreneur success → Subj wellbeing	0.650	0.052	14.273	0.000	Received
H8	Poverty reduction → subjective wellbeing	0.094	0.043	2.172	0.30	Received
<b>Indirect effect</b>						
H3	a(Ownstruct)_Poverty Reduction → subjective wellbeing	-0.001	0.028	0.053	0.958	Rejected
H5	a(Gender)_microfinance → subj wellbeing	-0.014	0.033	0.408	0.683	Rejected
H6	Microfinance → Poverty Reduction → subjective wellbeing	0.017	0.010	1.653	0.098	Rejected
H7	Microfinance → Entrepreneur success → subjective wellbeing	0.231	0.043	5.369	0.000	Received

Note: \* p < 0.05

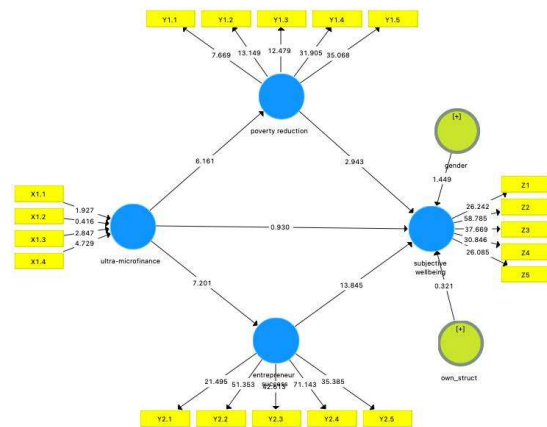
**Table 4**  
Hypothesis Testing for Small Businesses (Continued)

Hypothesis	Relationship	Std. Beta	Std. Error	t-value	p-values	Result
<b>Direct effect</b>						
H1	Microfinance → Poverty Reduction	0.484	0.079	6.161	0.000	Received
H2	Microfinance → Entrepreneur success	0.523	0.073	7.210	0.000	Received
H4	Entrepreneur success → Subj wellbeing	0.737	0.053	13.845	0.000	Received
H8	Poverty reduction → subjective wellbeing	0.166	0.056	2.943	0.003	Received
<b>Indirect effect</b>						
H3	a(Ownstruct)_Poverty Reduction → subjective wellbeing	-0.013	0.039	0.321	0.748	Rejected
H5	a(Gender)_microfinance → subj wellbeing	-0.037	0.026	3.1449	0.148	Rejected
H6	Microfinance → Poverty Reduction → subjective wellbeing	0.080	0.030	2.703	0.007	Received
H7	Microfinance → Entrepreneur success → subjective wellbeing	0.385	0.059	8.565	0.000	Received

Note: \* p < 0.05



**Fig. 2.** Empirical Model of the Role of Poverty Reduction and Entrepreneurial Success in Mediating Microfinance's Impact on Subjective Well-Being through Gender Considerations and Ownership Structure in Micro Businesses



**Fig. 3.** Empirical Model of the Role of Poverty Reduction and Entrepreneurial Success in Mediating Microfinance's Impact on Subjective Well-Being through Gender Considerations and Ownership Structure in Small Businesses

Figure 2 demonstrates that microfinance in the context of micro businesses has a positive effect on poverty reduction, with a t-value of 2.753. This empirical study confirms that Hypothesis 1 is accepted. Through access to ultra-microfinance initiatives such as the PNPM (National Program for Community Empowerment), farmers and micro-entrepreneurs in the agricultural sector can improve their businesses by adopting new technologies, increasing production capacity, and optimizing product distribution chains (Gehlich-Shillabeer, 2008; Nursini, 2020a). As a result, these entrepreneurs can increase per capita income. Therefore, empowerment programs via microfinance are seen as effective in reducing rural poverty (Gehlich-Shillabeer, 2008). Additionally, PNPM's integrated empowerment system is considered capable of creating a stable and sustainable



business environment amidst the many uncertainties of business, thus strengthening local economic resilience and improving entrepreneurs' wellbeing. Furthermore, this study shows that microfinance also has a positive impact on entrepreneurial success, with a t-value of 5.956, supporting Hypothesis 2. The program provides access to capital with lower interest rates and more flexible terms compared to formal financial institutions such as banks, offering farmers opportunities to increase productivity and innovate in their businesses (Chikwira et al., 2022). With financial support, farmers can overcome capital constraints, which have long been a major obstacle to business development. Access to flexible financial resources enables entrepreneurs to boost income, improve product quality, and expand marketing networks, ultimately contributing to overall wellbeing (Vanroose & D'Espallier, 2013). The program also enhances business skills, managerial capacity, and market knowledge through training and mentorship, thereby strengthening their competitiveness in both local and international markets (Newman et al., 2014). Consequently, the PNPM ultra-microfinance program is proven to be an effective instrument in stimulating the success of micro and small businesses in the agricultural sector, particularly in food crop production and the poultry sub-sector.

In addition, Fig. 2 also supports Hypothesis 4, with a t-value of 14.273, indicating a positive relationship between entrepreneurial success and subjective wellbeing. The success achieved by entrepreneurs through the PNPM program has had a positive impact on the subjective wellbeing of micro and small enterprise (MSE) entrepreneurs in the agricultural sector. This is driven by increased income, improved access to resources for farmers, and enhanced skills (Bertschi-Michel et al., 2020; Chatterjee et al., 2019b). The PNPM program not only helps agricultural MSMEs scale up their businesses, but it also contributes to a holistic improvement in quality of life. For instance, entrepreneurs report higher satisfaction with family life, optimism about the future, and a forward-looking perspective. This success strengthens the belief that economic empowerment through government programs is a critical factor in improving subjective wellbeing, especially in the agricultural sector in developing countries, which forms the backbone of rural economies (Przeziorka, 2017).

Fig. 2 also demonstrates a direct effect of poverty reduction on subjective wellbeing, with a t-value of 2.172, thus supporting Hypothesis 8. The poverty reduction achieved through the PNPM program, which targets micro-business entrepreneurs, has had a positive impact on the subjective wellbeing of MSME actors in the agricultural sector. By facilitating access to resources, providing training, and offering microfinance, MSMEs in agriculture have been able to increase production capacity and competitiveness (Ayanwale & Alimi, 2004; Chikwira et al., 2022; Gehlich-Shillabeer, 2008). This improvement not only enhances economic conditions but also fosters a sense of satisfaction and happiness in running agricultural businesses. Active participation in empowerment programs stimulates optimism among entrepreneurs, strengthening their perception of the future of their businesses (Lindblom et al., 2020). Therefore, poverty reduction programs like PNPM significantly contribute to improving subjective wellbeing, thereby strengthening overall economic resilience (Intyas et al., 2022). However, this empirical study did not find a direct effect of microfinance on subjective wellbeing, with Hypothesis 9 rejected at a t-value of 0.828. While microfinance provides access to capital for small business owners, the success rates among beneficiaries can vary. Not all recipients possess adequate managerial skills or business knowledge, which may lead to businesses not developing as expected. In such cases, failure, difficulties, and business dynamics can result in financial and emotional stress, potentially lowering subjective wellbeing (Hameed et al., 2024).

Additionally, the indirect effect in the case of micro businesses showed that ownership structure does not moderate the relationship between poverty reduction and subjective wellbeing, with a t-value of 0.958, leading to the rejection of Hypothesis 3. Several factors could explain this, including the tendency of family businesses to be closed off and conservative regarding innovation and decision-making. This limitation may hinder entrepreneurs' ability to adapt to market dynamics and business policy changes. Moreover, non-family businesses may lack strong emotional attachment to their ventures, resulting in a weaker sense of belonging. Consequently, the motivation to improve subjective wellbeing through poverty reduction might not be as strong as in family businesses (López-Pérez et al., 2018). Furthermore, small businesses' limited access to resources, technology, and markets could affect the effectiveness of the PNPM program in enhancing subjective wellbeing (Peck Christen et al., 2005). Although the program has potential for poverty alleviation, without strengthening capacity and access to better resources, ownership structures may not effectively moderate the impact of poverty reduction on the subjective wellbeing of MSME actors in the agricultural sector.

Similarly, gender did not moderate the relationship between microfinance and subjective wellbeing, resulting in the rejection of Hypothesis 5, with a t-value of 0.683. This is due to various factors, such as gender inequality in accessing resources, differences in decision-making, and social norms that continue to limit women's roles in the agricultural sector (Hussain et al., 2019).

This study also reveals that poverty reduction has not been able to mediate the relationship between microfinance and subjective wellbeing, with a t-value of 1.653, leading to the rejection of Hypothesis 6. Although microfinance is believed to enhance entrepreneurs' access to capital, its impact on subjective wellbeing is often indirect. The program's success in significantly reducing poverty requires time and more comprehensive interventions, such as skill development, improved market access, and additional support (Ayanwale & Alimi, 2004; De Hoop et al., 2014; Zulfiqar, 2017). Without substantial improvements in income or quality of life, the benefits of microfinance are unlikely to directly translate into better subjective wellbeing, meaning that poverty reduction does not serve as a mediator in this case.

However, the study confirms that entrepreneurial success fully mediates the relationship between microfinance and subjective wellbeing, with a t-value of 5.369. Microfinance is viewed as a service that provides crucial financial access to small farmers, allowing them to expand their businesses. However, the ability to successfully manage and grow the business is a key determinant of whether this financial assistance can truly enhance subjective wellbeing (Chatterjee et al., 2019a; Przepiorka, 2017). While microfinance offers initial capital, entrepreneurial success plays a vital role in improving individual wellbeing, such as life satisfaction, a sense of achievement, and happiness. Without entrepreneurial success, the positive effects of microfinance on subjective wellbeing may not be realized (Gehlich-Shillabeer, 2008).

Next, in the case of microfinance for small businesses in developing countries such as Indonesia, as shown in Fig. 3, Hypothesis 1 is accepted. The empirical evidence confirms a direct positive effect of microfinance on poverty reduction, with a t-value of 6.161. Microfinance also helps manage risks through business diversification and improved financial literacy, thereby strengthening the economic resilience of small business owners in the face of business uncertainties (Peck Christen et al., 2005). The study further confirms a direct positive effect of microfinance on entrepreneurial success, with a t-value of 7.210, supporting Hypothesis 2. Microfinance institutions provide relatively small loans, which are nonetheless significant in helping to increase the financial capacity of small business owners. The loan application process is simpler, more flexible, and more affordable compared to formal financial institutions (Olohunlana et al., 2023). Additionally, microfinance is seen as a program that offers mentorship and training for entrepreneurs, including financial management, agricultural techniques, and marketing strategies (Glaubitt et al., 2009; Hussain et al., 2019; Yu et al., 2020).

Hypothesis 4 is also accepted, demonstrating a direct relationship between entrepreneurial success and subjective wellbeing, with a t-value of 13.845. Business success leads to greater satisfaction and self-esteem, which in turn boosts happiness and subjective wellbeing. Thus, entrepreneurial success not only improves economic conditions but also positively impacts the wellbeing of business owners. Additionally, there is a direct effect of poverty reduction on subjective wellbeing, with a t-value of 2.943, supporting Hypothesis 8. The PNPM program has contributed to poverty alleviation not only materially but also by improving the quality of life and subjective wellbeing of entrepreneurs (Nursini, 2020b). However, the study was unable to accept Hypothesis 9, as no direct relationship between microfinance and subjective wellbeing was found, with a t-value of 0.930. Agricultural businesses often face high risks, such as unpredictable weather, pests, and commodity price fluctuations. While financial assistance may increase production, business uncertainty can lead to anxiety and stress, which can decrease subjective wellbeing (Hameed et al., 2024; Intyas et al., 2022; Su et al., 2021c; Tang et al., 2021b).

The study also demonstrates indirect effects in Hypotheses 6 and 7. Hypothesis 6 suggests that poverty reduction fully mediates the relationship between microfinance and subjective wellbeing, with a t-value of 2.703. As poverty decreases, rural entrepreneurs not only feel more financially secure but also experience greater life satisfaction (Lindblom et al., 2020). Similarly, Hypothesis 7 indicates that entrepreneurial success fully mediates the relationship between microfinance and subjective wellbeing. This research shows that effective mediation can maximize the benefits of microfinance, supporting the achievement of the PNPM program's goals in improving the quality of life for people in the agricultural sector.

## 5. Conclusion

This study contributes to several managerial aspects. First, it enhances the literature on the collaboration between Positive Accounting Theory (PAT) and Agency Theory by exploring the impact of microfinance interventions on ultra-micro and small agricultural businesses, particularly through the National Community Empowerment Program (PNPM) in Indonesia. The low level of financial literacy has hindered many entrepreneurs from achieving subjective well-being, especially in the food crop sector and the poultry subsector. Second, the empirical model developed in this study provides valuable insights for decision-makers to consider poverty reduction programs and strategies to enhance entrepreneurial success, enabling entrepreneurs to attain subjective well-being. Until now, international researchers have often overlooked the typology of business size when examining microfinance as a tool for poverty alleviation and improving entrepreneurial success, despite the fact that business size significantly influences success rates.

This study is limited to the East Java region; however, previous research has indicated that around 40% of micro, small, and medium enterprises (MSMEs) are located outside Java. Consequently, this study may not fully represent the MSME landscape in Indonesia. Additionally, while this study outlines the business size typology, it does not account for structural ownership as a method to enhance data uniformity among business groups categorized as family and non-family businesses. Research has shown that the form of ownership significantly influences business resilience.

Nonetheless, this study demonstrates a full mediation effect of poverty reduction and entrepreneurial success on the relationship between microfinance and subjective well-being in the context of small businesses. For micro businesses, entrepreneurial success mediates the relationship between microfinance and subjective well-being. Therefore, the practical implication of this study is the need to implement strategies that foster entrepreneurial success among micro and small businesses to help entrepreneurs achieve subjective well-being. In the case of micro businesses, microfinance can lead to subjective well-being, provided that the PNPM program effectively reduces poverty.

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