

Role of microfinance institutions in enhancing street vending business in India



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Abstract This study aims to analyze how the variables of financial inclusion, access to capital, and financial awareness regarding Microfinance Institutions have impacted the economic empowerment of street vendors in India. Street vending is one of the most prominent facets of the informal economy in India. However, there is a lack of economic understanding among street vendors, resulting in a lack of knowledge and awareness about microfinance services. The absence of knowledge about MFI schemes creates difficulties for street vendors in accessing finance for their business operations. The three independent variables utilized in the study are financial inclusion, access to capital, and financial awareness, respectively, with economic empowerment of street vendors as the dependent variable. Quantitative data has been collected through the use of standard research instruments. Primary data were collected from 393 street vendors in South India and were analyzed using AMOS. It is evident that financial inclusion, access to finance, and financial awareness regarding MFIs have an impact on the economic empowerment of street vendors. This research provides insights into how street vendors in India can optimally utilize microfinance services with the aim of empowering them economically.

Keywords: financial inclusion, microfinance institution, economic empowerment, Indian street vendors, access to finance

1. Introduction

1.1. Research Background

Employment in the informal sector has increased rapidly in all regions of the world in the globalization era, and India is no different. The availability of cheap capital, which raises capital intensity, has resulted in lower labor costs, particularly in the formal sector of the economy. As a result, the informal sector is a significant source of work for migrants from rural areas in metropolitan areas. It is difficult for unskilled rural migrants to obtain well-paying and stable jobs in urban and metropolitan regions. Hence, they found work on the streets (Prakasam, 2022). Street product vendors and service employees rely on the street economy for their livelihood.

One of the most prominent aspects of the informal economy is street vending. Contrary to other employees in many other casual jobs, street vendors are primarily self-employed, which means independent operators who handle their kind of enterprises (Baruah, 2004). This is one of the unique characteristics of street vendors. Vending is an everyday informal activity connected with rural-to-urban migration. Bhomick (2005) states that most Asian vendors move from rural areas. They are obliged to engage in vending since many have low educational levels and hence find it difficult to secure formal sector jobs (Assan 2008). On the other hand, Assan and Chambers (2014) report that in India, most street vendors run this business from generation to generation.

Female vendors are prevalent in some nations. However, India was found to be one of the countries with a low proportion of female street vendors (Assan and Chambers, 2014). Because of their minority status, female merchants are more vulnerable to additional issues such as criminal exploitation, sexual abuse, and harassment (NASVI 2008). Although women are in the minority, they are active in other sectors of India's informal economy (Kantor 2008), such as home-based manufacturing.

1.2. Role of microfinance institutions in empowering street vendors in India

Microfinance institutions are fast-growing financial units that aim to alleviate poverty, help economic progress, and support future progression by ensuring financial inclusion in an underprivileged society. Besides being an important component of financial development, the microfinance sector is also viewed as a poverty reduction method, particularly for developing countries (Kyereboah-Coleman, 2007). Two major microcredit schemes exist in financial associations, such as banks and cooperatives (Parasibu and Mindosa, 2021). They make microcredit available to those in need through various schemes for livelihood support or to assist them in starting microenterprises. In contrast, the second is the informal system, which includes traditional moneylenders, pawnbrokers, and trade-specific lenders. Both systems have advantages and disadvantages. Street sellers are a financially disadvantaged segment of society. Their earnings are modest, and the majority



of them are illiterate. Although street sellers require only a minimal amount of capital to start their business, the amount is sometimes impossible to manage independently. According to Mamun et al. (2020), although microfinance institutions provide unhindered financial assistance to these underprivileged communities, microfinance's high-interest rates result in a debt trap for street vendors.

Microfinance institutions and banks are two financial institutions that have been actively striving to improve the financial inclusion of street vendors. A city-by-city description of the involvement of active trade unions or associations, SHGs, and NGOs seeking to include street sellers financially has been examined by Bhowmik and Saha (2011). Thus far, the financial facility has extended credit to approximately 10,000 disadvantaged people about 2000 street sellers. Surprisingly, neither bank nor microfinance departments in Bhopal work with street vendors. Canara Bank's microfinance section is quite active throughout most of India, particularly Bangalore, although it does not correctly recognize street vendors. In Bhubaneswar, Street sellers are accessed only by Indian Bank, and three MFIs are active, which are as follows: Adhikar, Swayam Krishi Sangam (SKS), and Asmita. All three offer credit to street vendors through self-help groups. In Delhi, a cooperative rather than an official institution of credit works directly with street merchants to strengthen them financially. The NASVI promotes credit and thrift cooperatives, SHG-Bank linkages, and pension schemes to provide vendors with access to various financial services. MFIs in Hyderabad play a mediating role between banks and street vendors. Loans given by Swayam Krishi Sangam (SKS) in Hyderabad can be accessible only to groups, i.e., poor women. An MFI, Ujjivan Financial Ltd., provides loan facilities for street vendors in Jaipur. Bhowmik and Saha (2011) pointed out that despite being aimed at the urban poor, the financial inclusion initiative has paid little attention to street sellers.

1.2. Financial inclusion of street vendors in India

The World Bank has identified financial inclusion as one of the primary goals for achieving universal financial access by the end of 2020. The Government of India (GoI) launched a national-level financial inclusion initiative known as the Pradhan Mantri Jan Dhan Yojana (PMJDY) in 2016 to attain this goal. The most marginalized segments of the urban poor are characterized as street vendors. According to statistics, there are approximately 5-6 million street sellers in India (Nandru et al 2021). PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) was the particular scheme announced by the Ministry of Housing and Urban Affairs, GoI, to financially empower street vendors in all aspects. According to the study's findings (Siwela and Njaya, 2018), SHGs and MFIs have played an essential role in addressing the credit demands of street sellers. However, even when the interest rate is relatively high, and no collateral is needed, most respondents approach informal lending sources such as money lenders.

Financial inclusion acts as a catalyst in strengthening poor people's financial capability. By incorporating people from various socio-economic backgrounds into formal banking policy, financial inclusion is recognized as a critical instrument for reducing vulnerability and distress (Chakrabarty, 2009). For their business activity and personal and emergency needs, street vendors rely primarily on informal sources of money. Factors such as education level, business type, and economic position have shown a strong association with levels of financial inclusion, although the age group did not have any impact (Khan and Bhandari, 2022). Khan and Bhandari (2013) determined the credit sources used to run and expand the enterprises of street vendors. They emphasized that due to a lack of formal institutional credit, most vendors receive necessary credit through informal sources such as moneylenders, wholesalers, and families and suggested that street sellers can be given proper training in business operations and skill upgrading, which will, directly and indirectly, assist them in accomplishing financial well-being. This research empirically investigates how the variables' awareness toward microfinance institutions, financial inclusion by microfinance institutions, and access to finance from microfinance institutions impact the economic empowerment of street sellers in India. Furthermore, the study also examines to what extent the demographic characteristics of the street vendors owning the business moderate the relationship between the proposed variables.

2. Literature Review

Microfinance institutions can help street vendors launch or grow their enterprises, allowing them to enhance their income and improve their quality of life. They do this by offering small loans, financial education, and other forms of support. Microfinance can give street vendors the money they need to launch and expand their enterprises, as they frequently do not have access to bank loans and other types of funding (Sanrego and Antonio, 2013). Street sellers may be eligible for loans from microfinance organizations to buy supplies, inventory, and equipment. These are often small, short-term loans to assist street sellers in starting and maintaining their operations.

Street sellers might receive financial instruction from microfinance organizations in addition to capital. This training can teach street sellers to handle their finances more effectively, put money away for the future, and make wise business decisions. Through financial education, street sellers can learn how to manage the risks and hazards of operating their businesses. This paper aims to identify the impact that awareness of microfinance institutions, financial inclusion by microfinance institutions, and access to finance from microfinance institutions have on the economic empowerment of street sellers in India.

2.1. Awareness of street vendors toward MFIs

Kalra and Rajeev (2015) emphasize that the awareness of microfinance institutions (MFIs) need to be improved to meet the needs of their clients. To evaluate the level of financial literacy and comprehension among microfinance clients, the authors of this study developed the Microfinance Clients' Awareness Index (MCAI). This rating ranges from 1 (total ignorance) to 2 (full financial knowledge) for the microfinance product, a thorough statistic that evaluates all areas of financial literacy. The author argues that MFIs should focus on developing a comprehensive understanding of their clients and their needs to provide adequate services. Furthermore, the author suggests that MFIs should communicate their services and benefits effectively to their clients to increase their awareness. Additionally, the author argues that MFIs should collaborate with other organizations to expand their reach and build relationships with their clients. In conclusion, the author advocates for greater awareness of MFIs to meet the needs of their clients.

Vijayabhaskar and Kumar (2021) say that economic understanding is deficient- street vendors lack financial understanding, which leads to a lack of knowledge and awareness about banking services. They concluded that it is recommended that government and relevant authorities take action to increase awareness of financial inclusion schemes available to these vendors. The research conducted by Alhuja et al. (2017) discovered that most people from rural regions (83.5%) did not know about the microfinancing services provided by MFIs. This was attributed to the lack of effort by MFIs to advertise their services.

The study by Haridasan (2019) showed that the awareness regarding MFI services was high in rural areas. It was also observed that middle-aged women were the most informed concerning these services and that many individuals from rural areas benefitted from them, as they were driven to become small-scale entrepreneurs.

2.2. Relationship between financial inclusion by microfinance institutions and the economic empowerment of street vendors

Microfinance institutions are widely acknowledged as an essential tool for supporting the economic empowerment of street sellers. Microfinance institutions can assist street vendors in managing their enterprises more effectively and expanding their business operations by giving them access to financial services and goods. This can involve access to economic goods such as credit, savings, insurance, and technological support (Cabrera-Roldán, 2015). Street sellers now have access to financial inclusion through microfinance institutions, a significant source of economic empowerment. Microfinance institutions have enabled entrepreneurs to grow their enterprises, increase their income, and safeguard their way of life by providing them with access to official financial services. Thanks to microfinance institutions, street vendors can now manage their income and costs more effectively, protect their financial future, and explore new markets. They now earn more money and have greater economic and financial security, resulting in secure outcomes. Street vendors now have access to loans thanks to microfinance organizations, which have allowed them to expand their companies, buy merchandise and equipment, and hire more workers. This has facilitated street sellers in growing their businesses, boosting sales, and raising earnings.

Additionally, microfinance organizations have given street vendors access to traditional banking services, such as savings and insurance products, allowing them to better their income better and theirs (Ouedraogo et al., 2020). Street vendors may benefit from financial support if they want to overcome their financial challenges, such as a lack of capital and access to formal financial institutions (Cabrera-Roldán, 2015). Street sellers can borrow money to grow their enterprises, buy more goods or equipment, or participate in marketing or advertising campaigns thanks to the availability of credit. By giving street vendors access to savings, they can put money away for unforeseen expenses or business needs. Additionally, by making insurance products available, street vendors may safeguard their operations and guarantee that they can continue doing business in the case of a catastrophe or unforeseen event (Cabrera-Roldán, 2015). Overall, by giving street vendors access to financial services and products that can help them manage their enterprises more successfully and develop their operations, microfinance institutions can have a positive impact on their economic empowerment.

2.3. Impact of access to finance from microfinance institutions on the economic empowerment of street vendors

The emergence of microfinance institutions (MFIs) has significantly boosted the economic independence of street sellers. Street vendors have access to financing and financial services through microfinance, which can help them expand their companies and achieve financial security. Street vendors have been able to expand their enterprises, buy inventory, and invest in them because of the MFI's access to financing. As a result, street sellers now have higher production, better financial management, and greater economic stability (Gonzalez-Vega et al., 2016).

According to Kashyap and O'Keefe (2009), microfinance has also given street vendors access to capital and financial services that have allowed them to buy better-quality items and services, which has increased their sales and profitability. For instance, microfinance has allowed street merchants to buy higher-quality stock, resulting in higher sales and profits (Gonzalez-Vega et al., 2016). In addition, microfinance gives street sellers access to financial services such as loans and savings accounts, which can improve their financial stability and help them better manage their finances (Kashyap & O'Keefe, 2009).

Street sellers may benefit economically from having access to finance from microfinance institutions. Street sellers can receive low-interest financial services from microfinance institutions, including credit and savings. This might enhance the profitability of street vendors, allowing them to put more money into environmentally friendly ventures (Horowitz, 2019). Street vendors can benefit from microfinance institutions' access to financial education and business management assistance, which can help them make wise financial management decisions (Khan, 2018). Additionally, by giving access to financial services that were previously out of reach, microfinance institutions can assist street sellers in entering the official economy (Aguilar, 2019).

Street sellers' livelihoods may benefit from economic empowerment through access to finance from microfinance institutions. Street sellers may be able to buy more merchandise with access to finance, which would improve sales and earnings (Khan, 2018). Therefore, street vendors may be able to diversify their sources of income, increasing their financial security (Aguilar, 2019). Additionally, having access to finance can help street vendors participate in more environmentally friendly ventures, enhancing their capacity to handle risks and shocks (Horowitz, 2019).

2.4. Impact of the gender of street vendors on their economic empowerment

The economic empowerment of street vendors is significantly influenced by gender. Studies have revealed that in regard to access to cash, credit, and business training, women street sellers in developing nations frequently face higher obstacles than their male counterparts (Hilhorst, 2007). Additionally, women are more likely than men to experience harassment and discrimination, and they frequently have less access to marketplaces and customers (Hilhorst, 2007). Street vendors who are women may lack the financial clout to negotiate for lower rates or to obtain the same legal protections and support that are available to enterprises (Hilhorst, 2007). Additionally, because they are frequently the primary caretakers in their houses, women street sellers frequently struggle to strike a balance between their obligations as vendors and those of their personal lives (Hilhorst, 2007; Dillon & Siegel, 2018; Gouws & Tran, 2020). This can result in lower productivity, more stress, and less time to utilize the support systems that could help them succeed (Hilhorst, 2007). Despite these difficulties, initiatives have been made to assist and empower female street merchants. These include programmes such as the Women's Economic Empowerment Program in India, which offers legal protection, access to financing, business training, and markets for women street vendors (Bhandari & Yadav, 2017). Other programmes have emphasized giving women street vendors more access to networks and support systems, as well as credit and financial services (Bhandari & Yadav, 2017). The establishment of rules and regulations that forbid discrimination against women street vendors is just one example of the public policies that have been focused on to promote and protect them (Bhandari & Yadav, 2017).

The economic empowerment of women street vendors has increased as a result of these activities. Studies have demonstrated that these programmes have increased the earnings of women who work as street sellers while also giving them access to the tools and resources they need to thrive (Bhandari & Yadav, 2017). Additionally, more women are now able to access the same opportunities and support that are accessible to men, which helped to close the gender gap in street vending (Bhandari & Yadav, 2017).

Table 1 presents the works of previous researchers on the variables proposed in the research.

Table 1 Review of Related literature.

Author	Year	Variable studied
Hilhorst	2007	Gender
Bhandari and Yadav	2017	
Cabrera-Roldán	2015	Financial Inclusion
Lahiri	2018	
Ouedraogo et al	2020	
Gonzalez-Vega et al	2016	Access to finance from microfinance from MFIs
Kashyap and O'Keefe	2009	
Horowitz	2019	
Khan	2018	
Aguilar	2019	
Vijayabhaskar and Kumar	2021	Awareness toward MFIs
Alhuja et al	2017	
Haridasan	2019	
Kalra and Rajeev	2015	

2.5. Research Gap

Granting street vendors access to capital from microfinance institutions can be a potent weapon for their economic empowerment. Street vendors may be able to raise their income and make investments in more sustainable enterprises if financial services, financial education, and business management assistance are readily available. Their way of life may benefit from this, which could result in higher sales, profitability, and financial stability. This research intends to determine whether the economic empowerment of street sellers is aided by microfinance institutions and their schemes, especially with respect to the Indian context. The study tries to empirically investigate whether microfinance institutions have made it possible for street vendors to grow their companies, boost their revenue, and protect their financial future by giving them access to official financial services.

2.6. Conceptual Model

The conceptual model developed based on the review of the current literature is presented in Figure 1:

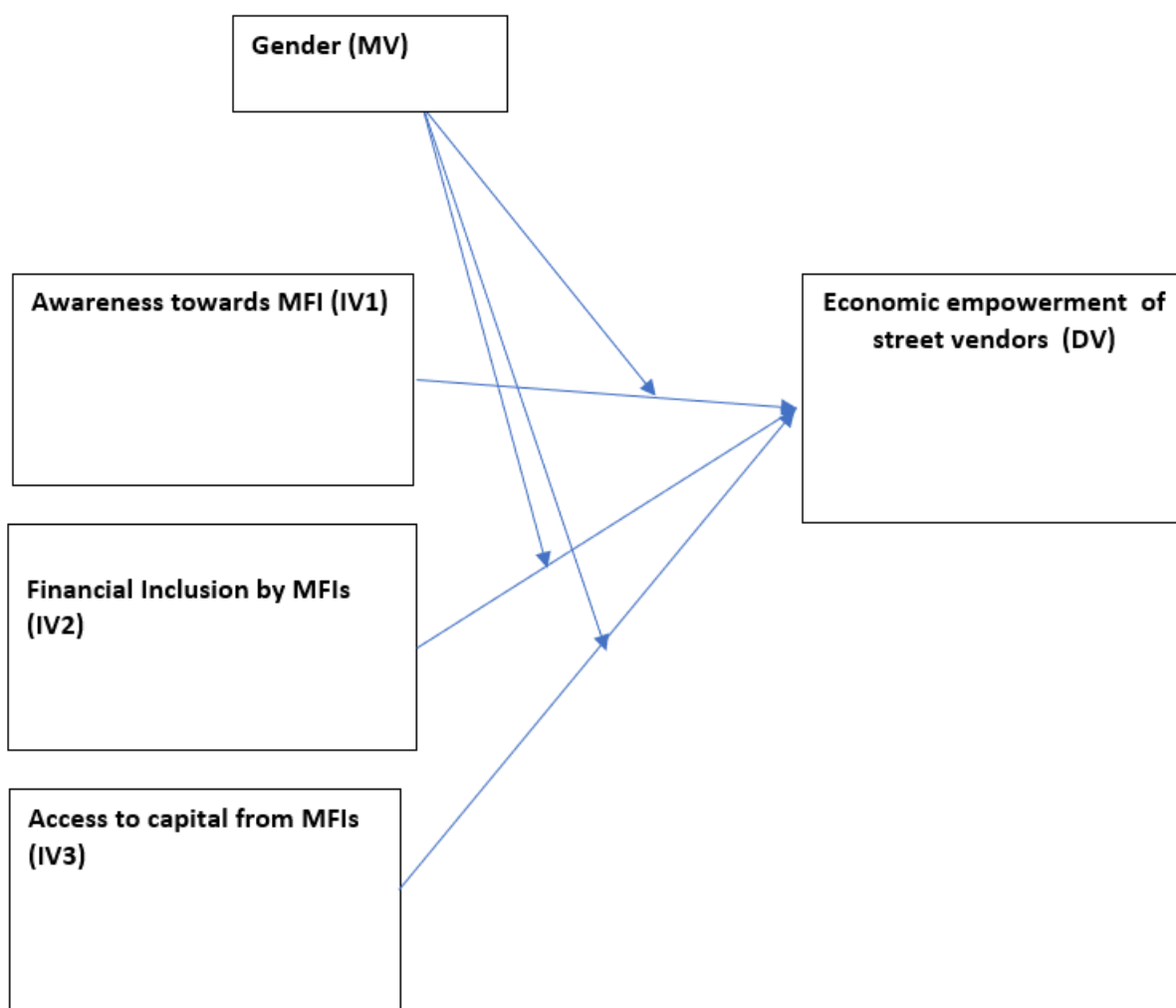


Figure 1 Economic empowerment of Indian street vendors through microfinance.

3. Research Hypotheses

In the context of understanding the multifaceted factors influencing the economic empowerment of street vendors, this research delves into various dimensions, including financial awareness, financial inclusion through microfinance institutions, access to capital, and the moderating role of gender. Economic empowerment is a crucial aspect of sustainable development, especially for individuals engaged in street vending, a sector often characterized by economic vulnerabilities. The following hypotheses aim to explore and elucidate the intricate relationships between these variables, shedding light on the dynamics that contribute to or hinder the economic empowerment of street vendors.

H1: The level of financial awareness among street vendors significantly influences their economic empowerment.

H2: Economic empowerment among street vendors is impacted by their access to financial inclusion through microfinance institutions.

H3: The availability of capital from microfinance institutions has a substantial effect on the economic empowerment of street vendors.

H4: The gender of street vendors moderates the relationship between financial awareness and their economic empowerment.

H5: The gender of street vendors moderates the relationship between financial inclusion and their economic empowerment.

H6: The gender of street vendors moderates the relationship between access to capital from microfinance institutions and economic empowerment.

4. Research Methods

4.1. Research Strategy and Approach

This research adapts a deductive approach. The research strategy is quantitative. A positivist research paradigm has been adapted in this study. The descriptive research design has been adapted in this study.

4.2. Sampling and Data collection

The sampling design adapted is probability sampling. Data were collected through a survey. Approximately 495 street vendors from Coimbatore were surveyed in this research to collect the primary data. A closed-ended questionnaire using standard instruments was employed in this research to collect data. The details of the instrument used are discussed in the following section.

4.3. Research Instrumentation

Access to finance from MFIs is assessed through a 4-item scale. The items in this scale draw inspiration from Kumar's (2005) study. Kumar (2005) conducted a global study on measuring financial access and devised several items for user surveys on financial access. The current version of the instrument incorporates three items used by Kumar (2005) to measure access to finance among Indian users. The current instrument places a particular emphasis on PMSVA Nidhi (Prime Minister Street Vendor AtmaNirbhar Nidhi), a recent scheme introduced by the Government of India with the aim of empowering street vendors in India (PMSVANidhi, 2020).

Awareness of microfinance institutions is gauged using 3 items, a modified version of the original 5-item scale developed by Mahmood et al. (2019) to measure awareness of Islamic finance in India. Similarly, financial inclusion by microfinance institutions is measured through a 6-item scale, a modified version of the 5-item scale developed by Nandru et al. (2021) to assess the financial inclusion of street vendors. The original scale comprised 5 items, while the modified scale includes 6 items. Economic empowerment is quantified through a 5-item scale, a modified version of the original 6-item scale developed by Borghei et al. (2015) to measure financial empowerment in Iran. All these instruments were evaluated using a 5-point Likert scale, ranging from 'Strongly Agree' to 'Strongly Disagree'. Street vendors' businesses were categorized into three types: those selling perishable goods, those selling nonperishable goods, and those offering services. Gender was assessed using a dichotomous scale with the options 'Male' and 'Female.'

5. Results and Discussion

The variables employed include access to finance from MFIs, financial inclusion, awareness toward MFIs, and economic empowerment, along with the moderating factor gender, which will be subsequently analyzed through Hayes Process analysis. Figure 2 depicts the proposed path diagram (model) for the research, incorporating both observed and unobserved exogenous and endogenous variables, respectively.

Chi square analysis for the path diagram has obtained the highest probability level of $p = 0.000$, where the minimum achievable values are df (degree of freedom) 146 for the 190 sample moments with chi-square value 303.923.

5.1. Regression estimation

The maximum-likelihood estimation (MLE) for the variables was observed where the squared multiple correlation (SMC) values of the developed models were obtained (refer to Table 2).

Through regression weight analysis, the SEM (structural equation modeling) model was constructed for the developed path diagram. The EEPOW, serving as an exogenous variable, remains unobserved along with e_1 to e_{20} , while the endogenous variables not observed include FA, FI, and AMF. The research's observed endogenous variables are FI (1-6), FA (1-5), AMFI (1-3), and EEPOW (1-5) (see Figure 3). Based on acceptable values and cutoff criteria, a model with CFI > 0.95, SRMR < 0.08, PClose > 0.05, RMSEA < 0.06, and CMIN/DF values between 1 and 3 is deemed significant and a good fit.

Table 2 Squared Multiple Correlations: (Group number 1 - Default model).

Variables	Estimate
AMFI3	.600
AMFI2	.736
AMFI1	.518
EEPOW5	.625
EEPOW4	.572
EEPOW3	.825
EEPOW2	.728
EEPOW1	.471
FI6	.294
FI5	.488
FI4	.515
FI3	.706
FI2	.744
FI1	.398
FA5	.749
FA4	.754
FA3	.813
FA2	.711
FA1	.649

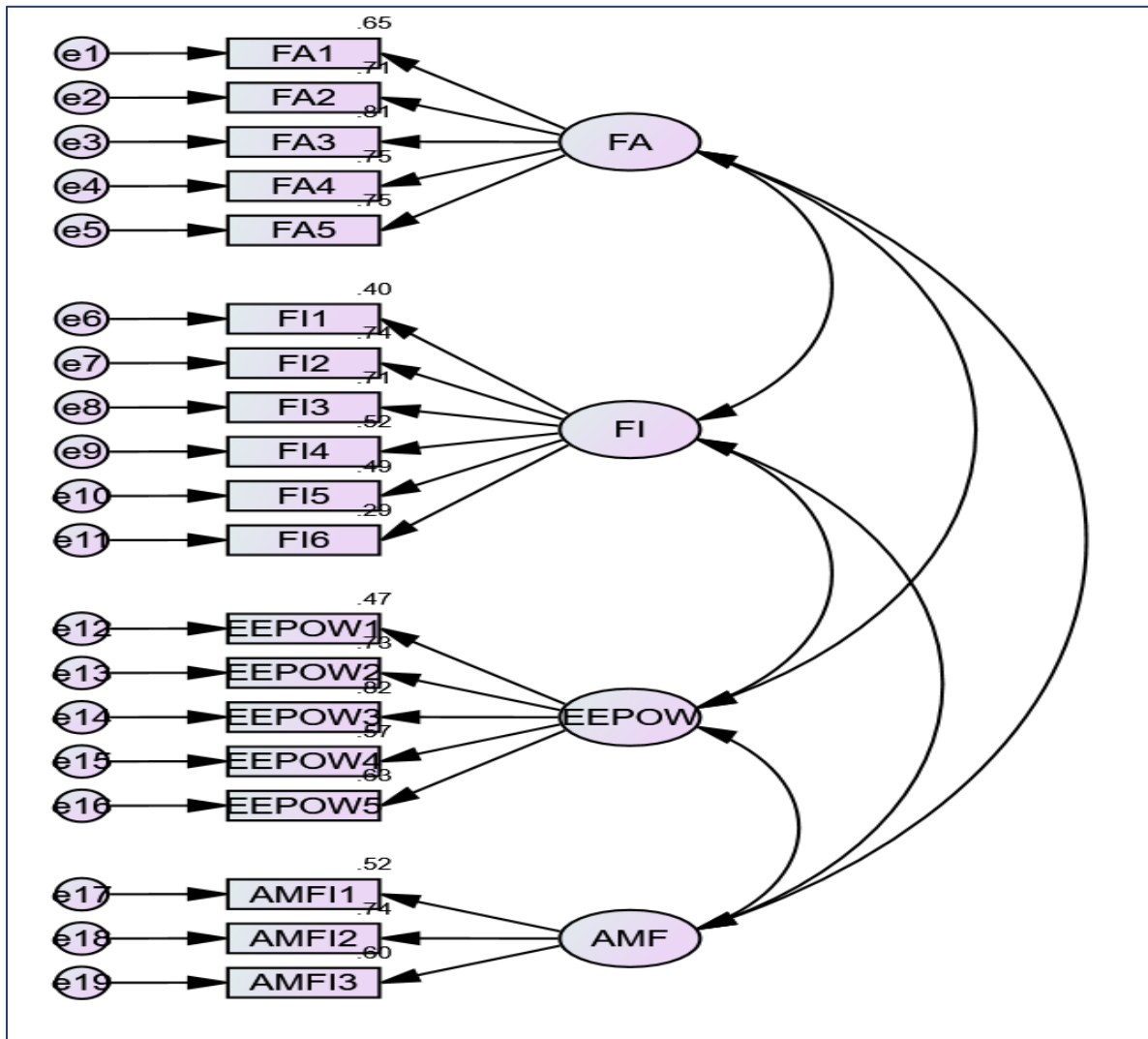


Figure 2 Path diagram.

5.2. Reliability test



The reliability of the variables is analyzed through Cronbach’s alpha (α) analysis. The values obtained are described in Table 3. The alpha values obtained are higher than 8, which indicates that all four variables are reliable where less than 5 is not a good fit.

Table 3 Reliability test.

Variable	No of Items	Cronbach's Alpha
Access to capital	3	.825
Economic empowerment	5	.897
Financial inclusion	6	.863
Financial awareness	5	.931

5.3. Confirmatory factor analysis

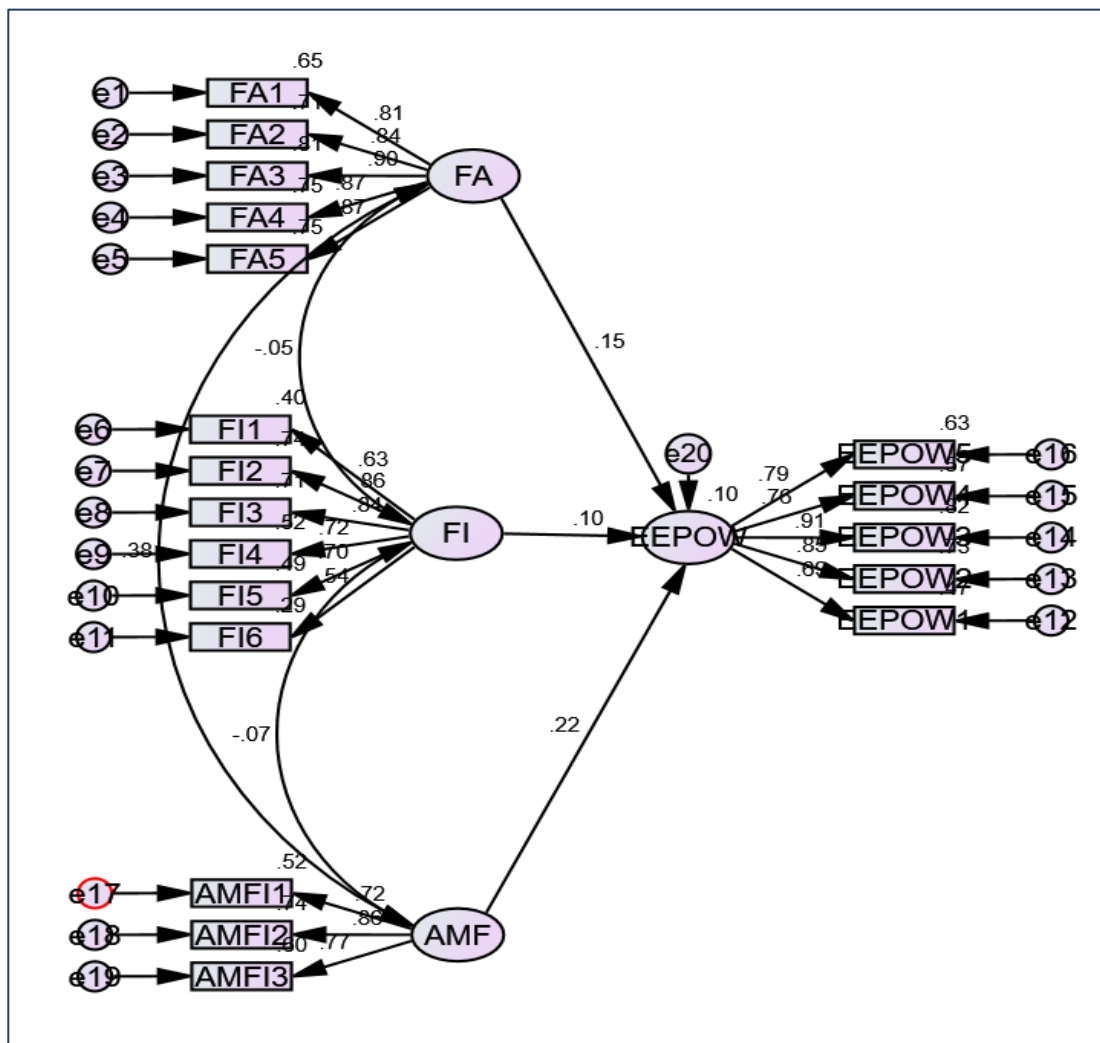


Figure 3 SEM.

Table 4 Chi-square analysis.

Computation of degrees of freedom (Default model)	
Number of distinct sample moments:	190
Number of distinct parameters to be estimated:	44
df (190 - 44):	146
Result (Default model): Minimum was achieved	
χ^2 :	303.923
df :	146
p :	.000

The developed SEM for the proposed research (refer to Figure 3) achieved the minimum acceptable values according to the chi-square analysis (refer to Table 4), where Chi-square (χ^2) = 303.923; df = 146; p = .000. The values



obtained through the regression analysis and confirmatory factor analysis show that the developed SEM obtained 303.923 as CMIN (minimum discrepancy function), 146 as DF, 0.053 as RMSEA (root-mean-square error f approximation), 0.039 as SRMR (standardized root-mean-square residual), 0.964 as CFI (comparative fit-index) and 0.2999 as PClose values. From the analysis and results, the model developed is an excellent fit for the study. The CMIN analysis (refer to Table 5) shows the model fit analysis values.

Table 5 CMIN values.

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	44	303.923	146	.000	2.082
Saturated model	190	.000	0		
Independence model	19	4587.773	171	.000	26.829

Table 6 RMR & GFI values.

Model	RMR	GFI	AGFI	PGFI
Default model	.025	.924	.901	.710
Saturated model	.000	1.000		
Independence model	.209	.354	.283	.319

From Table 6, the model's RMR (root-mean-square residual) value is observed to be <0.10 (0.025), and the GFI (goodness-of-fit) value is closer to 0.95 (0.924), signifying that the model is notably acceptable and well-suited for the developed research purposes. The SEM's adjustment measures considered here include NFI (normed fit-index), TLI (Tucker-Lewis index), and IFI (incremental fit index), with respective values of 0.934, 0.958, and 0.964 (refer to Table 7).

Table 7 Baseline comparison values.

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.934	.922	.964	.958	.964
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

The RMSEA scores of the model (refer to Table 8) fall within the acceptable range, with the model achieving 0.53 in relation to *df* 146. Thus, the RMSEA suggests that, given the degree of freedom, there is a close fit of variables in the developed model.

Table 8 RMSEA values.

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.053	.044	.061	.299
Independence model	.257	.250	.263	.000

The PRATIO (parsimony-adjusted ratio) measures of the developed model are examined (refer to Table 9) as the final measurement in the confirmatory factor analysis (CFA) method. In this measure, the null model is associated with the proposed models' *df*, where the PRATIO is multiplied by PCFI (parsimony CFI) and NFI (parsimony NFI). The obtained values are 0.854 (PRATIO), 0.797 (PNFI), and 0.823 (PCFI), with values closer to 1 indicating a better model fit. This outcome can also be compared with the AIC (Akaike Information Criterion) in SEM, which generally provides researchers with information about the complexity and accuracy of the developed model. A lower AIC value suggests greater accuracy between the two models (default and alternate). The obtained AIC value was 391.923 with a *df* of 146, while the independence model obtained an AIC value of 4625.773.

Thus, it is observed and examined that the SEM developed is significant, efficient and acceptable for research purposes and shows that the variables are associated with each other.

Table 9 Parsimony adjusted measures.

Model	PRATIO	PNFI	PCFI
Default model	.854	.797	.823
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

From Table 10, the observed estimates indicate that the obtained value provides the parameter values. The maximum likelihood is found from the given parameters of the observed values, where the observed population is distributed without

bias. Greater estimated values (MLE ≥ 1) are unbiased and efficient, indicating that the determined covariance or formulated regression criterion is significant.

Table 10 Regression Estimation Results.

			Estimate	S.E.	C.R.	P	Label
FA1	<---	FA	1.000				
FA2	<---	FA	1.096	.056	19.448	***	par_1
FA3	<---	FA	.988	.046	21.416	***	par_2
FA4	<---	FA	1.065	.053	20.280	***	par_3
FA5	<---	FA	.987	.049	20.186	***	par_4
FI1	<---	FI	1.000				
FI2	<---	FI	1.218	.091	13.398	***	par_5
FI3	<---	FI	1.215	.092	13.197	***	par_6
FI4	<---	FI	.995	.084	11.800	***	par_7
FI5	<---	FI	1.064	.092	11.560	***	par_8
FI6	<---	FI	.823	.088	9.398	***	par_9
EEPOW1	<---	EEPOW	1.000				
EEPOW2	<---	EEPOW	1.179	.077	15.296	***	par_10
EEPOW3	<---	EEPOW	1.298	.081	16.037	***	par_11
EEPOW4	<---	EEPOW	1.090	.079	13.739	***	par_12
EEPOW5	<---	EEPOW	1.081	.076	14.308	***	par_13
AMFI1	<---	AMF	1.000				
AMFI2	<---	AMF	1.263	.091	13.916	***	par_14
AMFI3	<---	AMF	1.137	.084	13.566	***	par_15

5.4. Principal Component Analysis (PCA)

From table 11 (PCA: Principal component analysis), it can be observed that more than 16% non-redundant-based absolute values are found with >0.05 and with factor values higher than .7 between the reproduced and observed values, indicating that the model is a good fit.

Table 11 Rotated Component Matrix.

	Component			
	1	2	3	4
FA1	.830			
FA2	.869			
FA3	.902			
FA4	.882			
FA5	.881			
FI1		.712		
FI2		.850		
FI3		.841		
FI4		.784		
FI5		.782		
FI6		.658		
AMFI1				.794
AMFI2				.866
AMFI3				.834
EEPOW1			.737	
EEPOW2			.869	
EEPOW3			.901	
EEPOW4			.817	
EEPOW5			.840	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 5 iterations.

5.5. Moderating relationship analysis through the Hayes process



The moderating factors of the independent and dependent variables are examined using SPSS and Hayes process analysis. A moderation effect analysis was conducted in the study. The results obtained illustrate the impact of the moderating factor 'gender' on the respondents and how it influences the variables. The outcome from Table 12 indicates that there is no moderation between gender, financial awareness, and economic empowerment of street vendors. Therefore, the hypothesis is rejected.

Table 12 Moderating effect of Gender on Financial Awareness and Economic Empowerment.

	Y: FATOT		X: EEPOWTOT			W: GENDER	
Model	R	R- sq	MSE	F	Df1	Df2	P
	.2284	.0522	15.2084	7.1377	3.0000	389.0000	.0205
Model	coeff	se	t	p	LLCI	ULCI	
Constant	10.7351	4.9354	6.7382	.0000	23.5296	42.9827	
EEPOWTOT	.1883	.5615	3.8218	.0002	1.0393	3.2523	
Gender	.4747	.3963	1.1977	.2318	.3045	1.2539	
Int_1	.0489	.1195	.4094	.6825	-.1860	.2838	
X*W	R2-chng	F	Df1	Df2	P		
	.0004	.1676	1.0000	389.0000	.6825		

The result from Table 13 indicates that there is no moderation of gender between financial inclusion and economic empowerment of street vendors. The p-value is not significant, leading to the rejection of the hypothesis. The results in Table 14 reveal that gender moderates the relationship between access to microfinance schemes and the economic empowerment of street vendors. The P-value is significant. The hypothesis is accepted.

Table 13 Moderating effect of gender on financial inclusion and economic empowerment.

	Y: FTOT		X: EEPOWTOT			W: GENDER	
Model	R	R- sq	MSE	F	Df1	Df2	P
	.1769	.0313	12.7775	4.1875	3.0000	389.0000	.0062
Model	coeff	se	t	p	LLCI	ULCI	
Constant	21.5910	.5534	39.0166	.0000	20.5030	22.6789	
EEPOWTOT	-.0740	.1585	-.4669	.6408	-.3857	.2377	
Gender	1.1871	.3633	3.2678	.0012	.4729	1.9013	
Int_1	.0935	.1095	.8534	.3940	-.1219	.3088	
Product key terms	EEPOWTOT x Gender						
X*W	R2-chng	F	Df1	Df2	P		
	.0018	.7282	1.0000	389.0000	.3940		

Table 14 Moderating effect of gender on financial inclusion and economic empowerment.

	Y: AMFTOT		X: EEPOWTOT			W: GENDER	
Model	R	R- sq	MSE	F	Df1	Df2	P
	.2942	.0865	4.8088	12.2853	3.0000	389.0000	.0000
Model	coeff	Se	t	p	LLCI	ULCI	
Constant	7.2627	.3395	21.3937	.0000	6.5953	7.9302	
EEPOWTOT	.1905	.0972	1.9593	.0508	-.0007	.3817	
Gender	.7578	.2229	3.4006	.0007	.3197	1.1960	
Int_1	-.0217	.0672	-.3236	.7464	-.1538	.1104	
Product key terms	EEPOWTOT X GENDER						
X*W	R ² -chang	F	Df1	Df2	P		
	.0177	.462	1.0000	386.0000	.004		



5.6. Hypothesis testing results and findings

From Table 15, it is observed that hypotheses 1, 4 and 5 are rejected, and hypotheses 2, 3, 6, and 8 are accepted, stating that IVs' financial inclusion and access to finance impact economic empowerment. Similarly, the demographic profile characteristics gender moderates the relationship between access to finance from MFIs by street vendors and their economic empowerment.

6. Final Considerations and Suggestions

The results obtained from regression and confirmatory factor analyses indicate a significant association between the independent variables (financial inclusion and financial access) and the dependent variable of economic empowerment. The moderating factor, gender, was also examined to assess its impact on the involved variables. The findings reveal that gender plays a moderate role in influencing the variables of financial access and economic empowerment. Similarly, the demographic profile characteristic 'gender' does not moderate the relationship between economic empowerment and awareness toward MFIs and financial inclusion. In their studies, authors Hilhorst (2007) and Bhandari and Yadav (2017) concluded that gender significantly affects economic empowerment in street vendors. The findings obtained through regression and CF analyses contradict the results of Hilhorst (2007) and Bhandari and Yadav (2017), where gender does not impact financial inclusion and awareness.

Table 15 Hypothesis findings and results.

S.No	Hypothesis	Accepted/Rejected
H1	Financial Awareness of the street vendors creates an impact on the economic empowerment of street vendors	Rejected
H2	Financial inclusion by Microfinance institutions creates an impact on the economic empowerment of street vendors	Accepted
H3	Access to capital from Microfinance institutions by street vendors creates an impact on the economic empowerment of street vendors	Accepted
H4	Gender moderates the relationship between financial Awareness and economic empowerment of street vendors	Rejected
H5	Gender moderates the relationship between financial inclusion and economic empowerment of street vendors	Rejected
H6	Gender moderates the relationship between the Access to capital from microfinance institutions by street vendors and economic empowerment	Accepted

Ethical considerations

Informed consent was provided to all the participants before primary data collection. The research methodology was approved by the ethics committee of the educational institution.

Conflict of Interest

The authors declare no conflicts of interest.

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