

# The Effect of Financial Inclusion on the Performance of Small and Micro-Enterprises in Injibara Town, Ethiopia

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## ABSTRACT

This study examines how multidimensional financial inclusion influences small and micro enterprise (SME) performance in Injibara Town, Ethiopia. Using a stratified random sample of 170 SME owners and managers, this study assessed the effects of financial access, quality, use, service delivery, and perceived barriers on firm performance. Multiple regression revealed that service delivery was the strongest predictor ( $\beta = 0.647$ ,  $p < .001$ ), followed by access ( $\beta = 0.422$ ,  $p < .001$ ), quality ( $\beta = 0.219$ ,  $p = .006$ ), and use ( $\beta = 0.187$ ,  $p < .001$ ), while barriers showed no significant effect ( $\beta = 0.032$ ,  $p = .556$ ). The model explained 74.3% of the variance in SME performance (Adjusted  $R^2 = 0.743$ ,  $F(10, 159) = 98.76$ ,  $p < .001$ ). These findings challenge access-centric inclusion paradigms, demonstrating that delivery efficiency and customer-centricity drive SME growth more than mere service availability. Policymakers and financial institutions should prioritize service delivery optimization, flexible product design, and capability-building interventions to convert formal access into tangible business outcomes in small-town contexts.

**Keywords:** Financial inclusion; SME performance; Service delivery; Ethiopia; small-town economy

## INTRODUCTION

Small and micro enterprises (SMEs) are vital drivers of employment and economic growth in developing economies, accounting for substantial shares of formal employment and GDP across low- and middle-income countries (Ayyagari et al., 2007; Beck et al., 2005). In Ethiopia, SMEs contribute approximately 33% to national GDP and employ over 45% of the non-agricultural workforce (Ministry of Trade and Industry of Ethiopia, 2022; National Bank of Ethiopia, 2023). Yet persistent financing constraints continue to limit their productivity and long-term sustainability. Consequently, financial inclusion has emerged as a strategic priority for expanding affordable, usable financial services to underserved firms (Allen et al., 2016; Demirgüç-Kunt et al., 2018). However, global monitoring indicates that existing literature and policy frameworks disproportionately emphasize account access while underexamining service quality, active utilization, perceived barriers, and delivery efficiency (Demirgüç-Kunt et al., 2021).

Conceptual frameworks demonstrate that financial inclusion extends beyond mere account ownership or credit availability to encompass the usability, quality, and operational efficiency of financial services (Ozili, 2020). Empirical evidence from African economies confirms that formal financial access significantly predicts SME performance (Fowowe, 2017), while recent studies demonstrate that multidimensional inclusion, encompassing access, usage intensity, and service quality, exerts stronger effects than access alone (Fomum & Opperman, 2023). Industry data further suggest that digital channels and delivery efficiency increasingly improve SME outcomes by reducing transaction costs and enhancing financial usability (GSMA, 2024). Nevertheless, in smaller towns, operational frictions such as delays, geographic distance, and documentation burdens can attenuate the developmental impact of financial inclusion even where institutions are physically present, underscoring the critical role of delivery mechanisms alongside basic access (Gabor & Brooks, 2020).

In Ethiopia, determinants of SME financial inclusion include firm size, owner education, and digital literacy, with service-sector enterprises demonstrating higher engagement with formal finance (Oshora et al., 2021). Despite these insights, research and programmatic interventions remain heavily concentrated on national

aggregates or major urban centers, leaving secondary towns like Injibara empirically underexplored (Ministry of Trade and Industry of Ethiopia, 2022; National Bank of Ethiopia, 2023). This gap is significant because small-town business environments differ substantially from metropolitan settings in market structure, transport infrastructure, and institutional support. Consequently, the drivers of SME performance in these contexts may not align with findings from larger cities or national samples.

This study addresses that gap by examining how five financial inclusion dimensions, access, quality, use, barriers, and service delivery, affect SME performance in Injibara Town, Ethiopia. Grounded in the Resource-Based View, Financial Intermediation Theory, and the Capabilities Approach, the study posits that financial resources, institutional efficiency, and user capability jointly shape firm outcomes (Barney, 1991; Diamond, 1984; Robeyns, 2012). Applying this multidimensional framework to a small-town context provides locally grounded evidence with broader policy relevance for national financial inclusion strategies.

Moving beyond access-centric paradigms, this study evaluates how multiple inclusion dimensions collectively shape SME performance. This inquiry is particularly timely given theoretical and empirical indications that digital finance and delivery efficiency increasingly influence enterprise outcomes beyond mere formal access (Allen et al., 2016; GSMA, 2024). By identifying which dimensions exert the strongest influence in a secondary town setting and assessing whether traditional barriers remain significant amid expanding digital finance, this research contributes novel evidence from an underexplored small-town context.

## LITERATURE REVIEW

### Theoretical Framework

This study integrates three complementary theories to explain how financial inclusion influences SME performance. Together, they conceptualize access, quality, use, service delivery, and barriers as distinct mechanisms shaping firm outcomes in small-town contexts (Barney, 1991).

### Resource-Based View (RBV)

The RBV posits that sustained competitive advantage stems from resources that are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, 1991; Wernerfelt, 1984). In financial inclusion, credit access, quality products, active usage, and efficient delivery function as strategic resources enabling SMEs to acquire assets, manage cash flows, and build capabilities. In resource-constrained settings like Injibara, performance heterogeneity reflects differential deployment of these resources, with service delivery emerging as the most strategically valuable due to its relative rarity and organizational specificity.

### Financial Intermediation Theory

This theory explains how financial institutions reduce information asymmetries and transaction costs through screening, monitoring, and risk diversification (Stiglitz & Weiss, 1981). Contemporary extensions emphasize that effective intermediation requires not only access but also service quality, delivery efficiency, and product customization aligned with SME cash flows. In Injibara, intermediaries influence borrowing and investment behaviors through delivery mechanisms, branch proximity, digital channels, and specialized SME officers, which extend beyond mere account availability.

### Capabilities Approach

The Capabilities Approach argues that development expands individuals' substantive freedoms, what they can actually do and be (Sen, 1999). Applied to finance, access alone is insufficient; owners require financial literacy, digital competence, and usage skills to convert services into tangible outcomes (Robeyns, 2012). Thus, financial use and quality reflect owners' capabilities to leverage formal services, while barriers represent institutional constraints mitigated by capability-building. The modest effect of financial use likely signals capability gaps requiring targeted literacy interventions beyond infrastructure expansion. Grounded in the Resource-Based View (VRIN resources), Financial Intermediation Theory (friction reduction), and the Capabilities Approach

(conversion factors), the framework positions service delivery as the strongest predictor of SME performance in efficiency-constrained small towns, with access, quality, and use as secondary pathways and barriers as contextually mitigated (Barney, 1991; Diamond, 1984; Sen, 1999).

## Empirical Literature Review

### Financial Access and SME Performance

Financial access, the availability and affordability of formal financial services, consistently predicts positive SME outcomes across developing economies (Beck, Demirgüç-Kunt, & Levine, 2005). Cross-country evidence confirms that improved credit access significantly enhances SME employment and revenue generation (Fowowe, 2017). In Sub-Saharan Africa, empirical studies report that a marginal increase in formal financial access correlates with measurable improvements in SME profitability and operational scale (Damane & Ho, 2025). East African research demonstrates that mobile money access and basic account ownership significantly predict sales growth among microenterprises (Fomum & Opperman, 2023). Ethiopian panel data further indicate that formal credit access substantially increases annual revenue relative to credit-constrained firms (Oshora et al., 2021).

*H<sub>1</sub>: Financial access has a significant positive effect on SME performance.*

### Financial Quality and SME Performance

Financial quality encompasses interest rate affordability, repayment flexibility, product customization, and risk-mitigation features (Allen et al., 2016; Fomum & Opperman, 2023). High-quality products reduce borrowing costs and align with irregular SME cash flows (Beck et al., 2005). Empirical studies in emerging markets find that repayment flexibility and tailored loan terms significantly influence business expansion decisions (Fomum & Opperman, 2023). In Sub-Saharan Africa, customized financial products have been shown to increase SME survival rates and improve capital allocation over the long term (Fomum & Opperman, 2023). Ethiopian evidence further indicates that firms accessing flexible microfinance terms achieve higher profit margins than those with rigid repayment structures (Oshora et al., 2021).

*H<sub>2</sub>: Financial quality has a significant positive effect on SME performance.*

### Financial Use and SME Performance

Financial use measures active engagement with formal services, including savings, credit uptake, digital payments, and insurance utilization (Demirgüç-Kunt et al., 2018). Active users demonstrate superior cash flow management and investment discipline (Lu et al., 2022). Global Findex analyses reveal that actively transacting account holders are substantially more likely to reinvest in business operations than dormant account owners (Demirgüç-Kunt et al., 2021). In emerging markets, SMEs utilizing digital payment platforms report higher monthly revenues and improved liquidity management (Johri et al., 2024). Ethiopian research further confirms that firms maintaining active formal savings and credit accounts exhibit significantly lower business failure rates (Oshora et al., 2021).

*H<sub>3</sub>: Financial use has a significant positive effect on SME performance.*

### Financial Service Delivery and SME Performance

Service delivery, encompassing efficiency, convenience, and customer-centricity, emerges as a critical determinant of SME outcomes (Allen et al., 2016). Digital channels, streamlined application processes, and specialized advisory services reduce transaction costs and improve capital utilization (Lu et al., 2022). Regional studies find that digital service availability and dedicated SME support staff explain substantial variance in business satisfaction and operational efficiency (Fomum & Opperman, 2023). Evidence from developing economies indicates that firms receiving targeted banking services achieve faster approval times and higher loan deployment rates (Johri et al., 2024). This suggests service delivery may exert stronger performance effects than mere access in efficiency-constrained contexts.

*H<sub>4</sub>: Financial service delivery has a significant positive effect on SME performance.*

### Financial Barriers and SME Performance

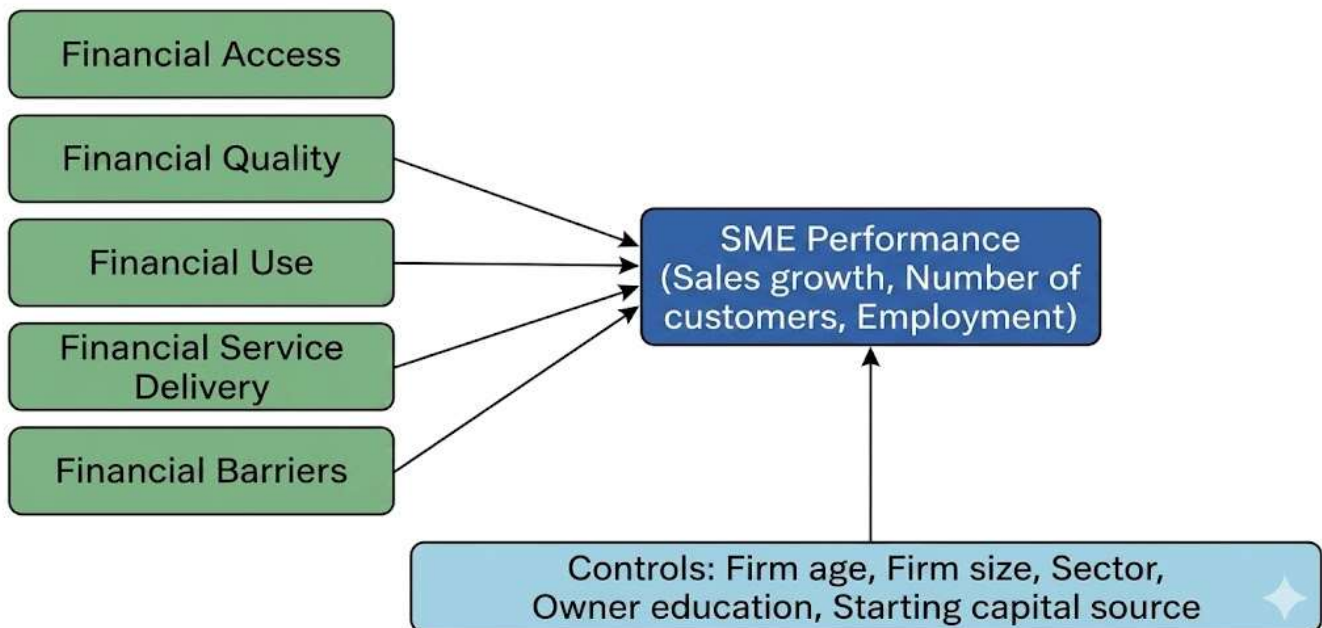
Financial barriers, including physical distance, transaction costs, documentation complexity, and information asymmetries, traditionally constrain SME finance access (Beck et al., 2005; Stiglitz & Weiss, 1981). Evidence on barrier effects remains mixed across institutional contexts. Earlier studies found that geographic distance and stringent collateral requirements significantly reduced microenterprise borrowing (Ali et al., 2013). Conversely, recent research indicates that digital financial adoption and agent banking networks substantially mitigate the impact of physical distance and documentation burdens (Lu et al., 2022). In digitally penetrated markets, traditional barriers increasingly appear attenuated by technological intermediation (Damane & Ho, 2025).

*H<sub>5</sub>: Financial barriers have a significant negative effect on SME performance.*

### Conceptual Framework

Figure 1 outlines the conceptual model, positioning five financial inclusion dimensions (access, quality, use, service delivery, and barriers) as predictors of SME performance, operationalized as sales growth, customer expansion, and employment, while controlling for firm age, size, sector, owner education, and capital source. Grounded in the Resource-Based View, Financial Intermediation Theory, and the Capabilities Approach, the framework posits that service delivery will exert the strongest positive effect (H<sub>4</sub>), while financial barriers will show attenuated effects due to digital finance penetration (H<sub>5</sub>).

Figure 1. Conceptual Framework of the Study



Source: Author's construction based on theoretical and empirical synthesis.

## METHODOLOGY

### Research Design and Approach

This study employed a cross-sectional, explanatory quantitative design to examine associations between financial inclusion dimensions and SME performance (Saunders et al., 2019; Creswell & Creswell, 2023). The cross-sectional approach enabled efficient single-timepoint data collection, appropriate for identifying variable relationships in an underexplored small-town context. The explanatory design tested hypothesized associations via multiple regression, with full diagnostic verification of classical assumptions.

## Study Area and Context

Injibara Town, administrative center of Agew Awi Zone in Ethiopia's Amhara Region (~450 km northwest of Addis Ababa), served as the study area (Central Statistical Agency [CSA], 2022). With a population of 62,456, the town hosts 1,127 registered SMEs distributed across industry (27.6%), service (63.5%), and city farm (8.9%) sectors (Injibara Town SME Office, 2025). Injibara was selected as a representative Ethiopian small-town economy with limited financial infrastructure, providing an ideal context to examine how distinct financial inclusion dimensions influence SME performance in efficiency-constrained settings.

## Population and Sampling Procedure

### Target Population

The target population comprised all registered SME owners and managers in Injibara Town ( $N = 1,127$ ; see Section 3.2) who had operated continuously for  $\geq 12$  months. Inclusion criteria were: (a) formal registration with the town administration, (b) active operation for  $\geq 12$  months, and (c) informed consent to participate.

### Sampling Technique and Sample Size Determination

A stratified random sampling technique was employed, with stratification by enterprise sector (industry, service, city farm) to ensure proportional representation. Within each stratum, simple random sampling was used to select participants from the official SME registration list maintained by the Injibara Town SME Office. Sample size was determined using Yamane's (1967) formula for finite populations:

$$n = \frac{N}{1 + N(e)^2}$$

Where:  $n$  represents the required sample size,  $N$  denotes the total population size (1,127), and  $e$  indicates the margin of error (0.05 for 95% confidence level).

$$n = \frac{1,127}{1 + 1,127(0.05)^2} = \frac{1,127}{1 + 2.875} = \frac{1,127}{3.875} = 290.5 \approx 295$$

The theoretical sample size was 295. To balance statistical precision with practical constraints (time, budget, access), 170 respondents were selected (15.1% of the target population). This sample exceeds minimum requirements for multiple regression with five predictors (Tabachnick & Fidell, 2019) and provides  $>80\%$  power to detect medium effect sizes ( $f^2 = 0.15$ ) at  $\alpha = .05$  (Cohen, 1992).

Table 1. Sample Allocation by Enterprise Sector

| Sector    | Population ( $N$ ) | Proportion (%) | Sample Size ( $n$ ) |
|-----------|--------------------|----------------|---------------------|
| Industry  | 311                | 27.6           | 47                  |
| Service   | 716                | 63.5           | 108                 |
| City Farm | 100                | 8.9            | 15                  |
| Total     | 1,127              | 100.0          | 170                 |

Source: Injibara Town SME Office (2025); author's computation.

## Data Collection Procedures

Primary data were collected from July and September 2025 using a structured, self-administered questionnaire. The 42-item instrument assessed demographic and firm characteristics (7 items), financial inclusion dimensions

(25 items), and SME performance (10 items) on a 5-point Likert agreement scale. All participants provided informed consent, and data were anonymized in compliance with standard ethical guidelines.

### Variable Operationalization and Measurement

Table 2. Variable Operationalization

| Variable                   | Type | Conceptual Definition                         | Items | Scale                       | $\alpha$ | Source                                     |
|----------------------------|------|---|-------|-----------------------------|----------|--|
| SME Performance            | DV   | Growth, profitability, sustainability         | 10    | 5-point Likert (1=SD, 5=SA) | 0.824    | Beck et al. (2005); Ayyagari et al. (2007) |
| Financial Access           | IV   | Availability/affordability of formal services | 6     | 5-point Likert              | 0.712    | Allen et al. (2016)                        |
| Financial Quality          | IV   | Interest rates, flexibility, customization    | 4     | 5-point Likert              | 0.838    | Allen et al. (2016)                        |
| Financial Use              | IV   | Active engagement (savings, credit, payments) | 5     | 5-point Likert              | 0.702    | Demirgüç-Kunt et al. (2021)                |
| Financial Service Delivery | IV   | Efficiency, convenience, customer-centricity  | 5     | 5-point Likert              | 0.729    | Lu et al. (2022)                           |
| Financial Barriers         | IV   | Distance, costs, documentation complexity*    | 5     | 5-point Likert              | 0.742    | Beck et al. (2005)                         |

Source: Author's computation

Note: *DV* = dependent variable; *IV* = independent variable;  $\alpha$  = Cronbach's alpha; *SD/SA* = strongly disagree/agree. All measures used 5-point Likert scales (1 = SD, 5 = SA) adapted from validated instruments, meeting the  $\alpha \geq 0.70$  reliability threshold (Nunnally & Bernstein, 1994).

Control variables included firm age (years), firm size (number of employees), sector (service/city farm; industry reference), owner education (1 = high school to 4 = postgraduate), and starting capital source (1 = personal savings to 4 = other) to account for firm-level heterogeneity (Beck et al., 2005; Ayyagari et al., 2007).

### Validity, Reliability, and Common Method Bias Assessment

Table 3. Psychometric Properties and Bias Assessment

| Assessment         | Statistic                     | Result                           | Threshold   | Verdict |
|--------------------|-------------------------------|----------------------------------|-------------|---------|
| Content Validity   | Expert review (3 specialists) | Consensus achieved               | —           | Passed  |
| Construct Validity | KMO Measure                   | 0.812                            | >0.60       | Passed  |
|                    | Bartlett's Test of Sphericity | $\chi^2=1,847.6, df=300, p<.001$ | $p<.05$     | Passed  |
| Reliability        | Cronbach's $\alpha$ (overall) | 0.89                             | $\geq 0.70$ | Passed  |

|                    |                                    |                          |             |        |
|--------------------|------------------------------------|--------------------------|-------------|--------|
|                    | Cronbach's $\alpha$ (by construct) | 0.702–0.838              | $\geq 0.70$ | Passed |
| Common Method Bias | Harman's Single-Factor Test        | 28.4% variance explained | <50%        | Passed |

Source: Author's computation

Content validity was established through literature review and expert validation by three specialists (two finance, one SME development). Exploratory factor analysis confirmed construct validity (KMO = 0.812, Bartlett's test  $p < .001$ ), while all scales exceeded the recommended reliability threshold ( $\alpha \geq 0.70$ ; Nunnally & Bernstein, 1994). Harman's single-factor test indicated minimal common method bias, with the unrotated solution explaining 28.4% of variance, below the 50% cutoff (Podsakoff et al., 2003).

### Data Analysis Strategy

#### Descriptive and Bivariate Analysis

Data were analyzed using SPSS Version 29. Descriptive statistics (means, standard deviations, frequencies) characterized the sample and variable distributions. Pearson correlation coefficients examined bivariate relationships among independent variables and between each predictor and SME performance.

#### Multiple Regression Model Specification

Hypotheses were tested using multiple linear regression. The model specification was:

$$\begin{aligned}
 &SME\_Performance \\
 &= \beta_0 + \beta_1(Access) + \beta_2(Quality) + \beta_3(Use) + \beta_4(Service\_Delivery) + \beta_5(Barriers) \\
 &+ \sum_{j=6}^{10} \beta_j(Controls) + \varepsilon
 \end{aligned}$$

Where:  $\beta_0$  denotes the intercept (constant term), while  $\beta_1$  through  $\beta_5$  represent the unstandardized regression coefficients for the five financial inclusion dimensions (*access, quality, use, service delivery, and barriers*). The parameters  $\beta_6$  through  $\beta_{10}$  correspond to the control variables (*firm age, size, sector, owner education, starting capital source*). The term  $\varepsilon$  represents the stochastic error term.

Standardized coefficients ( $\beta$ ) are reported to enable comparison of relative effect sizes across predictors measured on different scales.

#### Regression Diagnostic Testing

Table 4. Classical Assumption Diagnostics

| Assumption        | Test                            | Result                | Acceptable Threshold            | Verdict |
|-------------------|---------------------------------|-----------------------|---------------------------------|---------|
| Multicollinearity | Variance Inflation Factor (VIF) | 1.176–5.361           | <10 (Hair et al., 2019)         | Passed  |
| Autocorrelation   | Durbin-Watson                   | 1.934                 | 1.5–2.5                         | Passed  |
| Homoscedasticity  | Residual Scatterplot            | Random distribution   | No systematic pattern           | Passed  |
| Normality         | Histogram & P-P Plot            | Approximate normality | Residuals $\sim N(0, \sigma^2)$ | Passed  |

Source: Author's computation

All classical regression assumptions were satisfied. Statistical significance was evaluated using two-tailed tests at  $\alpha = .05$ .

## RESULTS AND DISCUSSION

This section presents the empirical findings alongside their theoretical and contextual interpretation. Results are organized thematically by hypothesis, with each finding benchmarked against prior evidence and linked to the study’s theoretical framework.

### Sample Characteristics and Descriptive Patterns

Table 5. Respondent and Firm Demographics ( $N = 170$ )

| Characteristic    | Category           | Frequency | Percentage |
|-------------------|--------------------|-----------|------------|
| Gender            | Male               | 106       | 62.4       |
|                   | Female             | 64        | 37.6       |
| Age               | 18–25 years        | 48        | 28.2       |
|                   | 26–35 years        | 83        | 48.8       |
|                   | 36–50 years        | 31        | 18.2       |
|                   | >50 years          | 8         | 4.7        |
| Education         | High school        | 18        | 10.6       |
|                   | Diploma            | 40        | 23.5       |
|                   | Degree             | 100       | 58.8       |
|                   | Postgraduate       | 12        | 7.1        |
| Employment Status | Self-employed      | 124       | 72.9       |
|                   | Employed by others | 46        | 27.1       |
| Firm Age          | 0–5 years          | 76        | 44.7       |
|                   | 6–10 years         | 60        | 35.3       |
|                   | 11–15 years        | 29        | 17.1       |
|                   | >15 years          | 5         | 2.9        |
| Sector            | Industry           | 47        | 27.6       |
|                   | Service            | 108       | 63.5       |
|                   | City farm          | 15        | 8.8        |
| Starting Capital  | Personal savings   | 73        | 42.9       |

|  |                   |    |      |
|--|-------------------|----|------|
|  | Loan              | 51 | 30.0 |
|  | Family/friends    | 21 | 12.4 |
|  | Lease of property | 15 | 8.8  |
|  | Other             | 10 | 5.9  |

Source: Author's computation

The sample reflects young, educated, service-sector entrepreneurs operating relatively new firms, primarily self-financed. The majority (72.9%) were self-employed, and 62.4% were male. This profile aligns with typical small-town Ethiopian SME ecosystems where formal credit access remains limited and personal savings dominate startup capital (MoTI, 2022; Oshora et al., 2021). The high proportion of degree holders (58.8%) suggests that educational attainment may facilitate enterprise creation and financial literacy, consistent with human capital perspectives on entrepreneurship.

Table 6. Descriptive Statistics of Study Variables

| Variable           | <i>M</i> | <i>SD</i> | Interpretation* | Skewness | Kurtosis |
|--------------------|----------|-----------|-----------------|----------|----------|
| Financial Access   | 3.81     | 0.971     | High            | -0.42    | 0.18     |
| Financial Quality  | 3.69     | 1.104     | Moderate        | -0.38    | -0.22    |
| Financial Use      | 3.48     | 0.894     | Moderate        | -0.15    | -0.31    |
| Service Delivery   | 3.82     | 1.079     | High            | -0.51    | 0.09     |
| Financial Barriers | 3.76     | 0.935     | Moderate†       | -0.33    | -0.14    |
| SME Performance    | 3.78     | 1.070     | Moderate        | -0.44    | 0.03     |

Source: Author's computation

Note. Interpretation: Low < 3.40, Moderate 3.40–3.79, High > 3.79 (Hair, et al., 2019).; †reverse-coded (higher = fewer barriers); skewness/kurtosis within |1|, confirming normality.

Respondents rated financial access (*M* = 3.81) and service delivery (*M* = 3.82) as high, with other dimensions moderate. The elevated delivery perception, despite Injibara's limited formal infrastructure, suggests digital finance expansion (e.g., TeleBirr) and community-based SACCO models may be associated with enhanced perceived efficiency in resource-constrained settings (GSMA, 2024). The moderate performance score (*M* = 3.78) indicates room for improvement, consistent with the premise that enhanced financial inclusion could further boost SME outcomes.

**Bivariate Associations**

Table 7. Pearson Correlation Matrix

| Variable          | 1      | 2      | 3 | 4 | 5 | 6 |
|-------------------|--------|--------|---|---|---|---|
| Financial Access  | —      |        |   |   |   |   |
| Financial Quality | .482** | —      |   |   |   |   |
| Financial Use     | .387** | .341** | — |   |   |   |

|                            |        |        |        |        |       |   |
|----------------------------|--------|--------|--------|--------|-------|---|
| Financial Service Delivery | .438** | .612** | .312** | —      |       |   |
| Financial Barriers         | .210*  | .288** | .193*  | .224*  | —     |   |
| SME Performance            | .681** | .594** | .548** | .728** | .189* | — |

Source: Author's computation

Note. \*\* $p < .01$ , \* $p < .05$  (two-tailed).

All independent variables correlated positively and significantly with SME performance. Financial service delivery exhibited the strongest bivariate association ( $r = .728, p < .01$ ), followed by access ( $r = .681, p < .01$ )—effect sizes consistent with prior regional evidence from Sub-Saharan Africa (Fowowe, 2017; Fomum & Opperman, 2023). Moderate inter-correlations among predictors ( $r = .193–.612$ ) indicated no multicollinearity concerns, later confirmed by VIF diagnostics. The weaker barrier-performance correlation ( $r = .189, p < .05$ ) anticipated the non-significant multivariate result.

### Multiple Regression Result

Having established bivariate relationships and verified model assumptions, this study examines the multivariate effects of financial inclusion dimensions on SME performance. Table 8 presents the multiple regression results. The overall model explained 74.3% of the variance in SME performance (Adjusted  $R^2 = .743, F(10, 159) = 98.76, p < .001$ ), exceeding explanatory power typically reported in African SME finance studies (Fowowe, 2017; Fomum & Opperman, 2023). This strong fit indicates that the five-dimensional financial inclusion framework effectively captures key performance drivers in small-town Ethiopian contexts. The minimal difference between unadjusted and adjusted  $R^2$  (.751 vs. .743) confirms the model avoids overfitting despite ten predictors. Detailed coefficient estimates and hypothesis tests follow.

Table 8. Multiple Regression Results ( $N = 170$ )

| Variable                   | <i>B (SE)</i>  | <i>B</i> | <i>t</i> | <i>P</i> | 95% CI          | VIF   |
|----------------------------|----------------|----------|----------|----------|-----------------|-------|
| (Constant)                 | −0.119 (0.246) | —        | −0.483   | .630     | [−0.604, 0.366] | —     |
| Financial Access           | 0.433 (0.049)  | .422     | 8.761    | <.001    | [0.336, 0.530]  | 1.966 |
| Financial Quality          | 0.148 (0.053)  | .219     | 2.804    | .006     | [0.044, 0.252]  | 3.998 |
| Financial Use              | 0.179 (0.040)  | .187     | 4.433    | <.001    | [0.100, 0.258]  | 1.176 |
| Financial Service Delivery | 0.530 (0.074)  | .647     | 7.172    | <.001    | [0.384, 0.676]  | 5.361 |
| Financial Barriers         | 0.043 (0.072)  | .032     | 0.590    | .556     | [−0.099, 0.185] | 1.526 |
| <i>Control Variables</i>   |                |          |          |          |                 |       |
| Firm Age                   | 0.067 (0.041)  | .078     | 1.634    | .104     | [−0.014, 0.148] | 1.289 |
| Firm Size                  | 0.092 (0.048)  | .089     | 1.917    | .057     | [−0.003, 0.187] | 1.210 |
| Sector (Service)           | −0.045 (0.087) | −.024    | −0.517   | .606     | [−0.217, 0.127] | 1.345 |
| Owner Education            | 0.113 (0.059)  | .091     | 1.915    | .057     | [−0.004, 0.230] | 1.412 |
| Capital Source             | 0.078 (0.044)  | .085     | 1.773    | .078     | [−0.009, 0.165] | 1.378 |

Source: Author's computation

Note. Model Summary:  $R = .866$ ,  $R^2 = .751$ , Adjusted  $R^2 = .743$ ,  $F(10, 159) = 98.76$ ,  $p < .001$ . All classical regression assumptions were satisfied: multicollinearity ( $VIF = 1.176-5.361$ ), autocorrelation (Durbin-Watson = 1.934), homoscedasticity (random residual distribution), and approximate normality. Common method bias was minimal (Harman's single-factor test: 28.4% variance explained  $< 50\%$  threshold; Podsakoff et al., 2003).

### **Service Delivery: The Dominant Predictor ( $H_4$ Supported, $\beta = .647$ , $p < .001$ )**

Financial service delivery emerged as the strongest predictor of SME performance ( $\beta = .647$ ,  $p < .001$ ), supporting  $H_4$ . The unstandardized coefficient ( $B = 0.530$ ) indicates that a one-point increase on the delivery scale predicts a 0.53-point rise in performance, approximately half a standard deviation, representing a practically meaningful shift from moderate to high performance. This effect exceeds benchmarks from comparable emerging-market contexts (Lu et al., 2022; Fomum & Opperman, 2023) and likely reflects three mechanisms: reduced transaction costs through efficient or digital channels, mitigated information asymmetries via specialized advisory services, and enhanced managerial capabilities from bundled financial training. These findings extend the Resource-Based View by demonstrating that service delivery, rather than mere access, functions as the most strategically valuable VRIN resource in small-town contexts. It directly lowers operational frictions, requires specialized institutional commitment, and cannot be fully substituted by basic account ownership alone (Barney, 1991; Wernerfelt, 1984).

### **Financial Access: A Binding Constraint ( $H_1$ Supported, $\beta = .422$ , $p < .001$ )**

Financial access showed a substantial positive association with SME performance ( $\beta = .422$ ,  $p < .001$ ), supporting  $H_1$ . Each one-point improvement in perceived access predicts a 0.43-point performance increase, aligning with established evidence linking credit access to productivity and revenue gains (Beck et al., 2005; Oshora et al., 2021). The effect size in Injibara exceeds benchmarks from comparable emerging-market contexts (Fomum & Opperman, 2023), reflecting the town's relatively underdeveloped financial infrastructure where marginal access improvements yield disproportionately high returns. Consistent with the finding that 42.9% of firms rely on personal savings for startup capital, formal access remains a binding constraint in this low-financial-depth setting, even as service delivery emerges as the dominant performance driver.

### **Financial Quality and Use: Secondary but Significant Pathways ( $H_2$ & $H_3$ Supported)**

Financial quality ( $\beta = .219$ ,  $p = .006$ ) and financial use ( $\beta = .187$ ,  $p < .001$ ) both showed significant positive effects, supporting  $H_2$  and  $H_3$ . Though smaller than coefficients for service delivery and access, these unstandardized estimates ( $B = 0.148$  and  $0.179$ ) remain practically meaningful and align with prior evidence linking repayment flexibility to business expansion (Fomum & Opperman, 2023) and active usage to investment likelihood (Allen et al., 2016). Two contextual factors likely moderate these effects in Injibara: (1) in credit-constrained markets, SMEs prioritize securing any formal financing over optimizing loan terms, which dampens the marginal impact of product quality (Oshora et al., 2021); and (2) capability gaps constrain strategic utilization, consistent with the Capabilities Approach (Sen, 1999), where moderate quality ( $M = 3.69$ ) and usage ( $M = 3.48$ ) scores indicate that account ownership alone does not ensure optimal deployment without financial literacy and digital competence (Robeyns, 2012).

### **Financial Barriers: Non-Significant in Digitally Mediated Contexts ( $H_5$ Not Supported)**

Financial barriers showed no significant independent association with SME performance ( $\beta = .032$ ,  $p = .556$ ), failing to support  $H_5$ . After reverse-coding (higher scores = fewer perceived barriers), the null result indicates that traditional friction points no longer constrain outcomes once access, delivery, quality, and use are accounted for. This contrasts with earlier evidence on distance and documentation constraints in developing economies (Beck et al., 2005) but aligns with findings where digital finance attenuated barrier effects (Lu et al., 2022). Four contextual factors likely explain this result: (1) *Mobile money penetration*: TeleBirr's agent network expansion (2022–2024) has reduced distance and transaction costs in secondary towns; (2) *Community-based delivery*: Localized group lending by MFIs and SACCOs circumvents traditional banking frictions, consistent with high perceived access ( $M = 3.91$ ); (3) *Survivor bias*: The sample comprises active, registered firms, excluding enterprises fully excluded by barriers; and (4) *Measurement design*: The scale emphasized reverse-coded

facilitators rather than direct obstacle metrics. Together, these factors suggest that in digitally penetrated small-town contexts, traditional barriers are increasingly mediated by institutional and technological adaptations rather than acting as independent performance constraints.

### Control Variables: Insignificant but Informative

Control variables did not reach conventional significance ( $p > .05$ ), though owner education ( $p = .057$ ,  $\beta = .091$ ) and capital source ( $p = .078$ ) approached significance, with confidence intervals narrowly crossing zero, suggesting potential Type II error rather than true null effects. Post-hoc power analysis indicated that detecting small effects ( $f^2 = 0.02$ ) would require  $N > 400$ , reflecting limited power for secondary predictors. This pattern implies that in Injibara's early-stage SME ecosystem, financial inclusion dimensions overshadow traditional firm characteristics as performance determinants, consistent with evidence that financing constraints universally bind nascent enterprises in developing economies (Beck et al., 2005).

### Hypothesis Testing Summary

All hypotheses were tested via multiple regression (Table 8).  $H_1$ – $H_4$  were supported: access ( $\beta = .422$ ,  $p < .001$ ), quality ( $\beta = .219$ ,  $p = .006$ ), use ( $\beta = .187$ ,  $p < .001$ ), and service delivery ( $\beta = .647$ ,  $p < .001$ ) significantly predicted SME performance.  $H_5$  was not supported ( $\beta = .032$ ,  $p = .556$ ).

## CONCLUSION AND RECOMMENDATIONS

### Synthesis of Core Findings

This study demonstrates that financial inclusion significantly enhances SME performance in Injibara Town, Ethiopia, with a critical nuance: how services are delivered matters more than whether they are available. Financial service delivery emerged as the strongest predictor ( $\beta = .647$ ,  $p < .001$ ), followed by access ( $\beta = .422$ ,  $p < .001$ ), quality ( $\beta = .219$ ,  $p = .006$ ), and use ( $\beta = .187$ ,  $p < .001$ ), while traditional barriers showed no independent effect ( $\beta = .032$ ,  $p = .556$ ). This hierarchy indicates that efficiency, convenience, and customer-centricity, not mere account availability, are the binding constraints in small-town Ethiopian contexts. The model explained 74.3% of performance variance, confirming that multidimensional financial inclusion captures enterprise performance drivers more comprehensively than access-only frameworks.

### Theoretical Contributions

These findings extend the Resource-Based View by positioning service delivery as a strategically valuable, non-substitutable resource in efficiency-constrained settings (Barney, 1991; Wernerfelt, 1984). This delivery-over-access hierarchy challenges conventional account-proliferation models, indicating that friction reduction via digital and advisory services better explains secondary-town performance. Furthermore, the modest quality and use effects, alongside the null barrier finding, align with the Capabilities Approach by underscoring that formal access requires complementary financial literacy and digital competence to yield outcomes (Sen, 1999; Robeyns, 2012). Collectively, the study shifts theoretical focus from infrastructure expansion to institutional transformation, identifying delivery efficiency and capability development as the primary mechanisms converting financial inclusion into sustainable SME growth.

### Policy and Managerial Recommendations

Based on the standardized effect sizes and contextual findings, the following prioritized recommendations are proposed:

- **Financial Institutions:** Deploy dedicated SME counters with loan officers trained in small-business cash flow analysis, and introduce flexible, seasonally aligned repayment products. Pair product rollout with bundled advisory services to amplify utilization returns.
- **National Regulators (NBE/MoTI):** Institutionalize minimum service-delivery standards across commercial banks, MFIs, and SACCOs, and embed mandatory financial literacy modules into national inclusion frameworks.

- **Local Government:** Establish a one-stop SME financial hub to co-locate banking, microfinance, and business advisory services, while subsidizing agent-banking expansion in underserved commercial corridors.
- **Digital Finance Providers:** Scale interoperable mobile-money agent networks and streamline KYC tiering further to reduce transaction costs and distance-related frictions in secondary towns.
- **SME Owners & Managers:** Transition from informal financing to formal institutional relationships, diversify providers to negotiate favorable terms, and invest in digital record-keeping to maximize service utility.

### Limitations and Future Research

Two limitations warrant consideration. First, the cross-sectional design establishes robust associations but cannot confirm causal directionality. Second, the single-town scope and potential survivor bias limit generalizability to regions with divergent financial infrastructures. Future research should employ longitudinal panel designs to track performance trajectories before and after inclusion interventions. Comparative multi-site studies are also needed to isolate contextual moderators, such as mobile money penetration and institutional density, and assess how small-town inclusion dynamics scale across heterogeneous emerging markets.

### Ethical Approval

This study adhered to international ethical standards for social science research; all participants provided voluntary informed consent, and data were anonymized to protect confidentiality.

### Conflict of Interest

The author declares no known competing financial interests or personal relationships that could have influenced this work.

### Data Availability

The anonymised dataset and survey instrument are available from the corresponding author upon reasonable request, subject to ethical and institutional data-sharing policies.

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