

Financial Inclusion Without Enterprise Scale-Up: Evidence from India's Self-Help Group Enterprises

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Abstract: India's Self-Help Group (SHG) movement is widely regarded as the world's largest community-based microfinance system. Yet, little establishment-level evidence exists on how SHG enterprises, the productive face of the SHG movement – compare with other informal, unincorporated enterprises in credit access and economic scale. Using unit-level microdata from India's Annual Survey of Unincorporated Sector Enterprises, we identify 23,137 SHG enterprises within a national sample of 712,651 establishments, and compare them using descriptive statistics, logistic regression, and OLS models with state and industry fixed effects. SHG enterprises are disproportionately rural and are far more likely to hold an institutional loan – 70.2 per cent of SHG enterprises hold one, against 8.4 per cent of non-SHG enterprises. This is consistent with the SHG-Bank Linkage Programme achieving its core financial-inclusion mandate. However, SHG enterprises report substantially lower fixed assets and value added than their non-SHG counterparts, a gap that persists even after controlling for loan access itself. This asymmetry suggests that credit access and productive scale are distinct outcomes, and that broadened finance has not yet translated into commensurate enterprise growth. This study also documents a pronounced digital divide and limited employment reporting among SHG enterprises, reflecting their predominantly financial-intermediation character. The findings caution against treating credit expansion as a sufficient condition for enterprise development, and point to complementary asset-building, skills, and market-linkage support as necessary companions to India's SHG-led financial inclusion strategy.

Keywords: Self-help Groups, Microfinance, Enterprise Development, Credit Access, Financial Inclusion, Informal Sector, India

Introduction

India's Self-Help Group (SHG) program is the world's largest community-based microfinance system. Beginning with a small pilot of 500 groups by the National Bank for Agriculture and Rural Development (NABARD) in 1992, the SHG-Bank Linkage Programme grew into a national architecture of thrift-and-credit groups that has since been absorbed into the government's flagship rural livelihoods programme, the National Rural Livelihoods Mission (Kumar et al., 2020; Singh, 2008; Srinivasan, 2002). The basic institutional form appears to have remained remarkably stable; groups of 10 to 20 members, usually women, meet regularly, save small amounts, lend to one another from the resulting corpus, and, once the group demonstrates a track record of regular savings and repayment, become eligible for bank credit at concessional terms without any collateral or security (Bauer et al., 2012; Swain & Floro, 2012). The Reserve Bank of India classifies lending to SHGs as priority-sector lending, and NABARD and public-sector banks have built an extensive institutional apparatus around group appraisal, grading, and credit-linkage (Shafi et al., 2025).

Much of what is known about SHGs, however, comes from programme evaluations, case studies, or household-level surveys of SHG members, which provide substantial evidence concerning the effects of SHG membership on individual women and households, while offering comparatively little evidence regarding the SHG as an economic unit in its own right (Kumar et al., 2021). India's enterprise surveys offer a different, albeit underused, analytical vantage point. Since the National Sample Survey Office's 73rd round enterprise survey, and continuing in the present Annual Survey of Unincorporated Sector Enterprises (ASUSE), the enumeration schedule for unincorporated enterprises has explicitly recognised SHGs as one of the possible ownership types of a surveyed establishment, alongside individual proprietorships, partnerships, and trusts.

This suggests that a nationally surveyed enterprise dataset is embedded within a survey designed primarily to measure the size and structure of India's vast unincorporated non-agricultural sector. The dataset may enable SHGs to be compared directly with other micro-scale enterprises using a common set of operational and financial indicators, namely registration status, years of operation, employment, fixed assets, value added, and, critically, loans outstanding.

Drawing on ASUSE unit-level microdata, this study constructs an analytical sample comprising 712,651 enterprises, of which 23,137 are recorded as SHG enterprises. Against this background, the analysis examines three interrelated questions at the intersections of enterprise development and microfinance research. First, do SHG enterprises differ systematically from other informal enterprises in their access to institutional credit? Second, do SHG enterprises differ in terms of economic scale, as reflected in fixed assets and gross value added? Third, to what extent are differences in institutional credit access and economic scale associated with SHG affiliation after accounting for other observable characteristics of SHG and non-SHG enterprises?

The empirical analysis employs a combination of descriptive comparisons, non-parametric tests of statistical significance, and multivariate regression models incorporating state and industry fixed effects. This empirical framework facilitates an assessment of whether SHG affiliation is systematically associated with differences in formal institutional credit access, fixed asset holdings, and gross value added, while accounting for observable heterogeneity across the sectors and locations in which enterprises operate. The inclusion of state and industry fixed effects further accounts for unobserved characteristics that are common to enterprises within particular geographic and industrial contexts, and thereby provides a more robust assessment of the relationship between SHG status and key dimensions of enterprise performance.

Yet, SHG enterprises appear, on the same comparisons, to be distinctly smaller in fixed assets and value added, and this scale gap likewise appears to persist after controlling for credit access itself. In other words, the SHG-bank linkage program appears to have solved, to a considerable degree, the access-to-finance problem that constrains so much of the discourse on informal enterprise development, without yet resolving the parallel problem of how that finance is deployed to build sustainable productive capacity. The study suggests that this pattern is consistent with, and may substantiate empirically, a long-standing concern in the microfinance literature that SHG credit is absorbed disproportionately into consumption smoothing, social expenditure, and very small-scale, often non-market, group activity rather than into asset-building enterprise investment (Greaney et al., 2016).

The remainder of the paper proceeds as follows. The next section situates the analysis within the literature on SHGs, microfinance, and enterprise development. The Methodology section delineates the ASUSE survey design, the construction of the analytical sample, the identification of SHG enterprises, and the empirical models. The Results section presents descriptive and multivariate findings. The Discussion section interprets these findings against the literature and considers their implications for policy and practice, and the Conclusion section summarizes the contribution and its limitations.

Literature Review

The SHG model occupies a distinctive place in the global microfinance literature because it explicitly subordinates individual lending to group-based thrift (Gugerty et al., 2018). Unlike the joint-liability lending popularised by the Grameen Bank, in which a bank extends credit directly to individual borrowers organised into mutually guaranteeing groups, the Indian SHG model builds outward from an internal savings-and-credit circuit: members save first, borrow from their own pooled savings, and only later, once the group has evidence of repayment history, does it access external bank credit, which is then typically on-lent internally according to rules the group itself sets (Halder & Stiglitz, 2016). Halder and Stiglitz's comparative analysis of the Grameen and SHG models may be instructive for the present paper because it frames the SHG's internal social capital, rather than the formal loan contract, as the primary disciplinary mechanism, and it suggests that large, rapidly scaled microfinance institutions may have lost this social embeddedness when they became formalised commercial lenders – a loss the authors connect to the 2010 Andhra Pradesh microfinance crisis. The finding that SHG-run enterprises show high rates of loan repayment performance (in the form of high registration and

loan-uptake rates) alongside small asset bases appears consistent with a model in which the group's institutional strength may lie in its capacity to intermediate finance reliably rather than in its capacity to deploy that finance at scale.

A second strand of the literature evaluates SHGs against the yardstick of women's economic empowerment. Kabeer's (1999) influential framework, which decomposes empowerment into resources, agency, and achievements, has been widely applied to SHG evaluations (Huis et al., 2017), including recent work by Kumar (2024) on Bihar's *JEEViKA* programme, describes how the community resource person model, in which experienced SHG members are paid to mobilise and institutionalise new groups, builds identity and income options for women in tandem, and argues that the transformational ambition of India's National Rural Livelihoods Mission (NRLM) goes beyond the transactional objective of simply disbursing credit. The data may provide indirect corroboration of the gendered character of this institutional form. Among the small subset of surveyed SHG enterprises reporting any remunerated worker, women appear to have accounted for the overwhelming majority of that employment. This pattern differs sharply from the gender composition of employment in non-SHG enterprises in the same sample.

A third and directly relevant aspect examines the relationship between SHG-based microfinance and multidimensional poverty and financial inclusion outcomes at the household level. Maity (2019) uses propensity score matching on a sample of SHG participant and non-participant households in Bodoland, Assam, and suggests that participation in SHG-bank linkage microfinance is associated with higher income, reduced multidimensional poverty, and improved financial inclusion, extending an earlier study by (Maity & Sarania, 2017) that reached similar conclusions using a different empirical strategy in the same region. Deepika and Sigi's (2014) research on Kerala's Kudumbashree programme examines an alternative, more explicitly state-led variant of the SHG model and argues that state sponsorship, federation into multi-tier structures, and convergence with local government schemes can extend the reach of SHG-based financial inclusion into some of the poorest and most marginalised households, a theme echoed in Kerala's disproportionately high representation among the states with the largest number of SHG enterprises in our own sample. Taken together, these household- and programme-level studies suggest that SHG participation may improve financial inclusion and, in many contexts, household income; however, because their unit of analysis is the household or the individual member rather than the SHG's own economic activity as a productive unit, they do not directly address the question this paper takes up: how the SHG itself performs as an enterprise once it is placed on the same accounting footing as other unincorporated establishments.

The research work of Sihna (2007) identifies the limitations of microfinance; argues that Indian SHGs have achieved impressive numerical scale and meaningful poverty outreach but have delivered only partial gains in terms of employment generation, a formulation captured in the chapter's own title. Panda and Atibudhi's (2011) study of SHG-based microfinance impacts on poor rural households similarly suggests that while SHG membership improves household welfare indicators, the translation of SHG credit into durable productive assets is not necessarily automatic. The regression results, which suggest that SHG status is associated with

substantially lower fixed assets and value added even after controlling for credit access itself, may provide large-sample, establishment-level evidence consistent with this cautionary reading: credit access and productive scale may not be equivalent, and an enterprise-development strategy premised on the assumption that expanding credit access will mechanically expand enterprise scale may overstate what SHG-linked finance has so far achieved.

The literature on enterprise- and value-chain development more broadly may offer a complementary perspective on why credit alone may be insufficient. (Stoian et al., 2012), on value-chain development for rural poverty reduction, argue that market-based interventions targeting the poor may frequently founder when participants lack the minimum asset thresholds, physical, human, financial, and social capital needed to participate successfully in value chains, and they call for asset-building, non-market interventions to precede or accompany market-facing support. (Donovan et al., 2017), extending this analysis with a case study of value-chain development tools used in Nicaragua, likewise suggest that design and implementation tools for enterprise support must be matched to the asset and capability constraints of the intended beneficiaries rather than assuming a uniform capacity to absorb market opportunities. Read alongside the finding reported here that SHG enterprises hold a fraction of the fixed assets of comparable non-SHG enterprises despite far higher rates of loan access, this literature suggests that the principal constraint may lie not in credit itself but in the absence of complementary asset-building and enterprise-development support of the kind these authors describe for value chains more generally. Shahidullah and Haque (2015) on a green microfinance intervention in Bangladesh, provide a related illustration of how microfinance institutions can bundle credit with non-financial technical support (in their case, environmental management practices) to shift the trajectory of microenterprises beyond what credit alone would achieve; an analogous bundling of SHG credit with enterprise-development services is one plausible route to closing the scale gap documented in this paper.

Dawson (1997) analysing unit-level enterprise survey data for Uttar Pradesh appears to find that a majority of rural non-farm informal enterprises are stagnant rather than expanding, and that a large share of both own-account enterprises and establishments report value added per worker below a notional subsistence income, which may raise concerns about the aggregate productivity of the sector regardless of ownership type. The study's methodological approach using unit-level enterprise survey microdata to compute value added and to examine growth and stagnation directly from establishment records rather than from household recall is close in spirit to the approach adopted here, and its finding of widespread stagnation among informal enterprises generally may provide an important benchmark against which to compare the specific scale disadvantage of SHG enterprises. This paper suggests that the SHG enterprises are smaller not only relative to a hypothetical formal-sector benchmark but also relative to an already-constrained population of informal enterprises.

Against this background, the present paper's contribution appears to lie in bringing establishment-level, nationally representative enterprise survey data to bear on a question that has mostly been examined through household surveys, programme evaluations, and qualitative case studies (Gugerty et al., 2018): how SHGs perform as enterprises, using the same indicators

employed to characterise the wider informal sector, and whether their apparent success in achieving credit access carries over into economic scale.

Methodology

3.1 Data source

The analysis draws on unit-level microdata from India's Annual Survey of Unincorporated Sector Enterprises (ASUSE), conducted by the National Sample Survey Office under the Ministry of Statistics and Programme Implementation (MoSPI). The survey covers 712,651 unincorporated non-agricultural enterprises in manufacturing, trade, and other services, using a multi-stage stratified sampling design with first-stage units (villages in rural areas, urban frame survey blocks in urban areas) and second-stage sampling of enterprises within selected first-stage units. Own-account enterprises (which do not employ hired workers on a fairly regular basis) and establishments (which do) are both covered, and the survey explicitly extends its coverage to SHGs, trusts, and similar collective and non-profit institutional forms wherever they are engaged in an economic activity that falls within the survey's scope, in recognition of the dominant role such bodies play in certain service-sector activities. The dataset in this study comprises 16 linked unit-level data files, including identification and survey outcome, operational and ownership characteristics, activity classification, principal and other operating expenses, principal and other receipts, value addition, employment status, compensation, land and fixed assets, loan outstanding, factor incomes, inventories, and information and communication technology use.

3.2 Identifying SHG enterprises

The dataset records the enterprise's ownership type during the reference period, thereby distinguishing among head-of-the-household proprietorships, same-household and different-household partnerships, SHGs, trusts, and other institutional forms. For analytical purposes, an enterprise is classified as an SHG enterprise when the ownership-type item is coded as SHG. Under this classification, 23,137 of the 712,651 sampled enterprises (3.25%) are identified as SHG enterprises, and 689,514 are non-SHG enterprises such as individual proprietorships, partnerships, trusts, and other forms.

3.3 Outcome variables

Credit access is measured in one way: an extensive-margin indicator equal to one if the enterprise reports any outstanding loan in rupees as of the last date of the reference year. Economic scale is measured using the market value of fixed assets owned by the enterprise, which is the sum of all asset categories reported in the land-and-fixed-assets block. Gross value added, which is computed using the survey's factor-income approach, comprises compensation of employees, rent, interest, and net surplus reported in the factor-incomes block. Because the value-added and expenditure blocks are collected for a 30-day reference period, the factor-income measure of value added is annualized by multiplying it by 12, thereby yielding an approximate annual gross value added. This appears to be a standard simplification in enterprise-survey analysis, although it may not correct for seasonality in individual enterprises' operations. Employment is measured as the total number of workers reported in the employment block, which follows the survey's specific convention for SHGs. The SHG

members who attend meetings and participate in group decision-making without drawing remuneration are not counted as workers, so that only paid office-bearers or paid staff of an SHG are reflected in this measure. As a descriptive supplement, the analysis also reports the separately recorded SHG membership size, an item specific to SHG-type enterprises that captures total group membership regardless of remuneration status.

3.4 Control variables and empirical models

The study constructs three indicators: rural location, formal registration under any act or authority, and years of operation. Descriptive comparisons between SHG and non-SHG enterprises are tested for statistical significance using two-proportion z-tests for binary indicators and Mann-Whitney U tests on log-transformed values for continuous, right-skewed variables, such as loan amount, fixed assets, value added. The study then estimates a logistic regression of the binary loan-access indicator on SHG status, rurality, years of operation, and registration status, with fixed effects for the 20 states and 15 two-digit industry codes; estimation is restricted to these categories for tractability, and the resulting sample comprises 542,272 enterprises, including 20,754 of the 23,137 SHG enterprises. It also estimates parallel ordinary least squares (OLS) regressions of log fixed assets and log annualised gross value added on the same covariates plus the loan-access indicator, using heteroskedasticity-robust standard errors. All models are estimated on the unweighted micro-sample; the implications of this choice, as well as those of the survey's design weights, are considered in the methodology's concluding remarks.

Formally, the credit-access model may be represented as

$$\text{logit}(\text{Pr}(\text{Loan}_i = 1)) = \beta_0 + \beta_1 \text{SHG}_i + \beta_2 \text{Rural}_i + \beta_3 \text{Years}_i + \beta_4 \text{Registered}_i + \delta_s + \gamma_k + \varepsilon_i,$$

where i indexes enterprises, δ_s denotes a fixed effect for the state in which enterprise i is located, and γ_k denotes a fixed effect for its two-digit industry classification.

The scale-model specifications may be represented in parallel by the following linear form:

$$\ln(Y_i) = \beta_0 + \beta_1 \text{SHG}_i + \beta_2 \text{Rural}_i + \beta_3 \text{Years}_i + \beta_4 \text{Registered}_i + \beta_5 \text{Loan}_i + \delta_s + \gamma_k + \varepsilon_i,$$

where Y_i denotes fixed assets owned or annualised gross value added. In both sets of models, β_1 , the coefficient on SHG status, may be regarded as the parameter of primary interest; it may capture the conditional association between SHG ownership and the outcome, net of location, sector, enterprise age, registration, and, in the scale models, current credit access. Because the industry fixed effects are defined at the two-digit level and the state fixed effects at the state level, the models may not fully account for finer-grained sectoral or sub-state locational differences between SHG and non-SHG enterprises.

3.5 Survey Weights and Population Estimates

The ASUSE files used for this analysis include a multiplier variable intended to gross sample observations to population estimates under the survey's multi-stage design. The multiplier serves in the computation of design-weighted proportions as a robustness check on the study's descriptive comparisons, since ratios of weighted sums are invariant to a common scaling error in the multiplier and therefore remain informative even if the absolute scale of the multiplier cannot be independently verified from the data used. The study does not, however, report an absolute weighted population total because the sum of the data used across all sampled

enterprises appears not to correspond to any plausible population magnitude for India's unincorporated sector, suggesting that the multiplier as supplied may require combination with additional design-stage weighting components not present in the data used for this study. The study therefore reports unweighted sample counts as the primary basis for statements about sample composition, and design-weighted percentages only where they serve as a robustness cross-check on unweighted findings, a limitation the study identifies explicitly rather than resolving it by assumption.

Results

4.1 Sample composition and geographic distribution

Of the 712,651 enterprises in the dataset, 23,137 (3.25 per cent) are classified as SHG. SHG enterprises appear to be concentrated in a subset of states with long-standing SHG-promotion programmes: Andhra Pradesh accounts for 12.0 per cent of all sampled SHG enterprises, followed by Telangana (10.4 per cent), Chhattisgarh (8.1 per cent), Odisha (8.1 per cent), Jharkhand (8.0 per cent), Kerala (8.0 per cent), Maharashtra (7.8 per cent), West Bengal (7.6 per cent), Tamil Nadu (6.5 per cent), and Bihar (4.1 per cent). This geographic pattern closely corresponds to the well-documented history of the SHG movement, which took root earliest and most intensively in undivided Andhra Pradesh through the state government's own poverty-reduction programmes (Deshmukh-Ranadive, 2004), later folded into national schemes and in Kerala through the *Kudumbashree* programme.

4.2 Operational characteristics

SHG enterprises appear substantially more likely to be located in rural areas than non-SHG enterprises (73.4 per cent versus 40.9 per cent, respectively) and to be formally registered under an act or authority (89.7 per cent versus 40.5 per cent). Almost all SHG enterprises (99.8 per cent) are classified as establishments rather than own-account enterprises under the survey's hired-worker criterion, compared with 80.2 per cent of non-SHG enterprises. This administrative classification, however, may significantly overstate the share of SHGs with active hired employment, a point taken up below. SHG enterprises have, on average, operated slightly longer than non-SHG enterprises (2.87 years versus 2.76 years, respectively). On digital adoption, SHG enterprises appear to lag distinctly behind non-SHG enterprises: only 0.02 per cent and 8.5 per cent of the SHG sample report computer and internet use, respectively, compared with 7.6 per cent and 46.4 per cent among non-SHG enterprises. SHG enterprises also appear less likely to report having faced an operational problem in the preceding year (6.3 per cent versus 18.7 per cent), which may reflect the more limited market exposure of many SHGs' savings-and-credit activity rather than a genuinely lower incidence of operational risk. The share of enterprises maintaining audited accounts is statistically indistinguishable between the two groups: 1.30 per cent in each case.

4.3 Credit access

The most pronounced difference between SHG and non-SHG enterprises appears to concern access to institutional credit: 70.2 per cent of SHG enterprises report an outstanding loan, compared with 8.4 per cent of non-SHG enterprises. This corresponds to an unweighted gap of almost 62 percentage points, which appears to widen slightly under design-weighting (77.2 per

cent versus 7.8 per cent). Among enterprises with any outstanding loan, the median loan outstanding is also substantially higher for SHG enterprises (Rs. 205,000) than for non-SHG enterprises (Rs. 60,000). By contrast, the mean loan size appears higher among the much larger and more heterogeneous non-SHG borrower population (Rs. 713,344 versus Rs. 335,686 for SHG borrowers), reflecting a long right tail of very large loans among a small number of formally organised non-SHG financial and trading enterprises. The log-scale Mann-Whitney comparison, which is less sensitive to this tail, suggests that the typical SHG loan is significantly larger than the typical non-SHG loan.

Table 1: Descriptive Statistics of SHG and Non-SHG enterprises

Indicator	SHG Enterprises	Non-SHG Enterprises	Test statistic	p-value
Rural location (%)	73.43	40.93	$z = 98.50$	<0.001
Registered under any Act (%)	89.69	40.49	$z = 149.13$	<0.001
Establishment (with hired workers) (%)	99.81	80.20	$z = 74.57$	<0.001
Computer use (%)	0.02	7.58	$z = -43.39$	<0.001
Internet use (%)	8.49	46.36	$z = -113.87$	<0.001
Operational problem reporting (%)	6.26	18.74	$z = -48.28$	<0.001
Maintenance of audited accounts (%)	1.30	1.30	$z = 0.05$	0.96
Outstanding loan status (%)	70.23	8.41	$z = 302.80$	<0.001
Median loan outstanding (with loan) (Rs.)	205,000	60,000	U-test (log)	<0.001
Median fixed assets owned (Rs.)	6,320	362,000	U-test (log)	<0.001
Median annualised Gross Value Added (GVA; Rs.)	840	22,320	U-test (log)	<0.001
Mean years of operation	2.87	2.76	U-test	<0.001

Source: Author compilation from ASUSE

A multivariate logistic regression of loan access on SHG status, with controls for rurality, years of operation, registration status, and fixed effects for state and two-digit industry (Table 2), suggests that this credit-access advantage is not an outcome of SHG enterprises' concentration in particular states or sectors. The coefficient on SHG status appears large, positive, and statistically significant (2.096), corresponding to an odds ratio of 8.14. Conditional on state, industry, rurality, years of operation, and registration status, an SHG enterprise may have approximately eight times the odds of holding an outstanding institutional loan compared with an otherwise similar non-SHG enterprise. Registration status appears to be independently associated with substantially higher odds of loan access with a coefficient of 1.091, while years of operation may be associated with lower odds of current loan access (coefficient: -0.251), a pattern discussed below.

Table 2: Logistic regression on determinants of loan access

Variable	Coefficient (log-odds)	Odds ratio	p-value
Self-help group (SHG) enterprise (=1)	2.096 (0.076)	8.14	<0.001
Rural location (=1)	0.191 (0.021)	1.21	<0.001
Operational tenure	-0.251 (0.006)	0.78	<0.001
Registration status (=1)	1.091 (0.021)	2.98	<0.001
State fixed effects	Yes	—	—
Industry (National Industrial Classification, NIC, two-digit) fixed effects	Yes	—	—
Number of observations (N)	542,272		
Pseudo R-squared	0.187		

Source: Author compilation from ASUSE

4.4 Economic scale: fixed assets and value added

Although they appear to exhibit greater access to credit (Gugerty et al., 2018), SHG enterprises report substantially lower fixed assets than non-SHG enterprises. The analysis includes 15,235 SHG enterprises (65.9 percent of the SHG sample) and 683,954 non-SHG enterprises (99.2 percent of the non-SHG sample) with non-missing fixed-asset data. The median value of owned fixed assets is Rs. 6,320 for SHG enterprises, compared with Rs. 362,000 for non-SHG enterprises; a Mann-Whitney test on log-transformed values corroborates this difference. Annualised gross value added follows a parallel pattern, although value-added data are considerably limited for SHG enterprises; non-missing factor-income value-added data are available for only 10.7 percent of sampled SHG enterprises and 68.0 percent of non-SHG enterprises. The median annualised value added is Rs. 840 for SHG enterprises against Rs. 22,320 for non-SHG enterprises.

Table 3: OLS regressions on log fixed assets and log annualised GVA

Variable	ln(Fixed assets)	ln(Annualised gross value added (GVA))	p-value (both specifications)
Self-help group (SHG) enterprise (=1)	-4.187	-2.408	<0.001
Rural location (=1)	0.074	-0.128	<0.001
Years of operation	0.154	0.015	<0.001
Registered (=1)	0.926	1.422	<0.001
Outstanding loan (=1)	0.332	0.792	<0.001
State fixed effects	Included	Included	—
Industry (National Industrial Classification [NIC], two-digit) fixed effects	Included	Included	—
Observations (N)	529,050	357,857	
R-squared	0.328	0.643	

Source: Author compilation from ASUSE

Note: heteroskedasticity-robust (HC1) standard errors used for significance testing; standard errors omitted from the table for brevity. Both dependent variables are natural logarithms of rupee values.

Ordinary least squares regressions of log fixed assets and log annualised value added on SHG status and the same set of controls used in the credit-access model, and the loan-access indicator itself, suggest that the scale gap is not explained by SHG enterprises' credit access, registration, rural location, industry, or state. SHG status is associated with 4.19 log points lower fixed assets and 2.41 log points lower annualised value added, controlling for the same covariates. In both estimates, loan access itself appears to be positively and significantly associated with scale; the coefficient is 0.332 for fixed assets and 0.792 for value added. The results are consistent with credit playing a productive role for the enterprises that hold it; however, this positive credit-scale relationship appears insufficient to close the substantially larger scale gap associated with SHG status itself.

4.5 Employment

Employment data suggest a further, distinct pattern that complicates straightforward comparison. The employment information on total workers in the dataset is available for 99.8 per cent of non-SHG enterprises but only 15.2 per cent of SHG enterprises. The SHG members participating in group meetings and decisions without drawing remuneration are not considered workers. Because, for the large majority of surveyed SHGs, no member appears to draw individualised remuneration, the information is left blank rather than recorded as zero. Among the minority of SHG enterprises for which a worker count is available, the mean is 1.19 workers, lower than the non-SHG mean of 2.00 workers, and the workforce is overwhelmingly female. Women constitute 96.5 per cent of workers in this SHG subsample, compared with 28.0 per cent in non-SHG enterprises. Separately, the survey records a group-membership item specific to SHG enterprises, available for s, with a mean membership of 10.65 and a median of 10. This is consistent with the existing microfinance literature (Bauer et al., 2012). The membership figure, however, appears to measure group size rather than enterprise employment and should therefore be distinguished from the worker counts.

4.6 Robustness check

As ASUSE employs a stratified multi-stage sampling design, the study cross-validated the main descriptive comparisons using the survey's design-based multiplier, computing weighted proportions as ratios of weighted sums – a formulation that remains valid under the scaling ambiguity in the multiplier noted in the Methodology section. The weighted credit-access rates for SHG and non-SHG enterprises are 77.2 per cent and 7.8 per cent, respectively; this gap appears marginally wider than its unweighted counterpart, while the weighted estimates of rural share, registration share, and digital adoption rates among SHG enterprises appear to move in the same direction and to be of broadly comparable magnitude to the corresponding unweighted values. This consistency suggests that the main findings reported in the study are unlikely to reflect differential over- or under-representation of particular strata within the sampled SHG enterprises. However, fully design-consistent standard errors, which would additionally require accounting for clustering at the level of the primary sampling unit, could not be computed given the multiplier variable available in the dataset underlying this study.

Discussion

The pattern documented in the Results section, very high and statistically robust credit access alongside very low economic scale, is, we suggest, the central empirical fact this paper contributes to the enterprise development and microfinance literature, and its implications and limits warrant careful delineation. It does not necessarily imply that the SHG-bank linkage model has failed on its own terms. The extensive literature on SHG-led financial inclusion reviewed above, including work published by (Maity, 2019) on Assam and by (Deepika & Sigi, 2014) on Kerala, suggests real gains in financial inclusion, income, and multidimensional poverty reduction associated with SHG participation, and the present finding that SHG enterprises are far more likely than other informal enterprises to hold an institutional loan is itself direct, establishment-level corroboration that the linkage model appears to achieve its intended function, moving previously unbanked or underbanked economic units into a formal credit relationship (Angelucci et al., 2015). Nor does the finding necessarily imply that SHG enterprises exhibit deficient performance relative to an absolute benchmark; Mishra's (2019) analysis of unit-level enterprise data for Uttar Pradesh suggests that stagnation and low value added per worker are pervasive across India's informal enterprise sector (Kanbur, 2017), so that a scale gap between SHG and non-SHG enterprises may be interpreted as a relative, rather than an absolute, judgement.

The finding suggests that credit access and productive scale are empirically and conceptually distinct outcomes, and that a policy or programme logic predicated on treating expanded credit access as a sufficient condition for enterprise growth is not well supported by these data. This is precisely the caution raised by Stoian et al. (2012) and Donovan et al. (2017) on expanding access to a single resource (credit or a market opportunity) may not automatically translate into the accumulation of the other assets (physical capital, technical skills, market linkages, managerial capacity) that determine whether an enterprise can grow. The regression results appear to reinforce this point in a specific way: even after statistically controlling for whether an enterprise currently holds a loan, SHG status remains associated with fixed assets and value added that are lower by several log points.

If credit access alone were the binding constraint on SHG enterprise scale, the expectation would be that this gap would narrow substantially, or perhaps even reverse, once loan access is held constant; instead, it persists almost undiminished. This is consistent with the concern, echoed in (Buswage et al., 2026) and implicit in Halдар and Stiglitz's (2016) account of the SHG's internal, socially embedded credit circuit, that a meaningful share of SHG-linked credit is absorbed into internal thrift-and-credit rotation, consumption smoothing, and small emergency or social expenditure by individual members, rather than into asset formation at the level of a shared group enterprise, a use of funds that is legitimate and may often improve member welfare, but that will not appear as enterprise-level fixed-asset accumulation or value added in a survey such as the Annual Survey of Unincorporated Sector Enterprises (ASUSE), which captures only the group's own economic activity.

The employment findings in this study appear to be particularly novel and insightful. The fact that a worker-count item is recorded for only 15 per cent of SHG enterprises, against essentially

all non-SHG enterprises, appears not to be primarily a data-quality problem; rather, it may reflect a direct, survey-instruction-driven consequence of the fact that most SHGs, as economic units, do not employ anyone in the conventional sense their members are simultaneously owners, savers, borrowers, and (where relevant) unpaid participants in the group's collective decisions, a structure the survey's own definitions explicitly anticipate. This suggests that many SHGs captured in this dataset function primarily as financial-intermediation and mutual-insurance vehicles for their members, rather than as production or service enterprises that employ labour, which appears consistent with the National Industrial Classification code that the survey's activity-coding rules typically assign to them. Where this paper's data do capture SHG-linked production activity, the minority of groups with a recorded worker count, the workforce appears to be overwhelmingly female, echoing the empowerment-oriented literature on SHGs (Kabeer, 1999; Kumar, 2024) and reinforcing the argument that whatever productive activity SHGs do undertake remains an important, if numerically modest, channel of women's economic participation.

The very low rates of computer and internet use among SHG enterprises, set against apparently higher digital adoption among non-SHG enterprises, suggest a further, distinct policy concern: a digital divide that runs parallel to, and is not resolved by, the credit-access advantage documented above (Girollet, 2023). If future rounds of India's digital-financial-inclusion agenda, or enterprise-development programmes bundled with SHG credit, are to reach this population effectively, the near-total absence of computer use and the modest internet penetration recorded here suggest that digital literacy and access constraints are likely to bind well before digital-finance products can be expected to have much traction among SHG-run economic activity, a caution consistent with the broader literature on the uneven gender and geographic reach of India's digital-finance expansion (Meenakshi et al., 2025).

Implications for practice and policy

The findings suggest three concrete directions for practitioners and policymakers working within India's SHG-Bank Linkage Programme and the NRLM.

First, credit-linked enterprise support to SHGs would benefit from an explicit asset-building or capital-goods financing component distinct from the working-capital and consumption-smoothing role that internal thrift-and-credit rotation already serves well, since the results suggest that the latter function is already operating at considerable scale without yet producing commensurate fixed-asset accumulation. Programmes that bundle credit with in-kind capital goods, equipment leasing, or matching-grant asset-financing windows, of the kind piloted in several state rural livelihoods missions, may therefore more effectively address the documented scale deficit than credit-limit expansion alone.

Second, the near-absence of computer and internet use among SHG enterprises indicates that digital-finance and digital-record-keeping initiatives aimed at this population should not presume a baseline of digital access comparable to that of individually owned informal enterprises; assisted-digital models, in which a paid community resource person or bank correspondent mediates digital transactions on behalf of the group, are likely to remain necessary for the foreseeable future rather than merely serving as a transitional measure.

Third, given that the survey's own activity-classification convention records financial intermediation as the major activity of almost every SHG in the sample, programme monitoring systems that rely on similar administrative or survey classifications should be read with the same caution that is warranted here: a classification of "financial services" should not be interpreted to mean that a group has no production activity, only that its recorded financial-intermediation turnover exceeds that of any other single activity, and monitoring frameworks aiming to track SHG livelihood diversification may need to draw on supplementary, group-level activity records rather than on enterprise-survey major-activity codes alone.

This study has some limitations arising from its reliance on secondary data. The value-added measure, annualised from a 30-day reference period, does not correct for seasonality. More importantly, value-added and employment data exist for only a smaller number of SHG enterprises, those with recordable production activity. Therefore, the results may not generalise to the many SHGs engaged solely in thrift-and-credit intermediation. The analysis is also unweighted, so reported standard errors are conservative rather than fully design-consistent. Additionally, the survey's activity classification and ownership-type coding may miss SHG-linked micro-enterprises registered individually. These estimates thus capture SHGs as directly recorded productive units, not the full scope of SHG-supported economic activity.

Conclusion

This paper presents a comparative assessment of SHG-enterprises and other unincorporated enterprises, based on unit-level microdata from India's Annual Survey of Unincorporated Sector Enterprises, with respect to credit access, economic scale, and employment, based on an analytical sample of 712,651 surveyed establishments that includes 23,137 SHG enterprises. The central finding appears to be an asymmetry between financial inclusion and productive scale.

The SHG enterprises appear to be approximately eight times more likely, in odds terms, to hold an outstanding institutional loan than comparable non-SHG enterprises, controlling for state, industry, rural location, years of operation, and registration status, although they report noticeably lower fixed assets and value added than non-SHG enterprises, a disparity that appears to persist even after loan access itself is controlled for. This trend is consistent with a body of prior research that has cautioned against treating expanded credit access as a proxy for enterprise development, and it suggests that policies and programmes seeking to build on the apparent success of India's SHG-bank linkage architecture may need to attend explicitly to complementary asset-building, skills, and market-linkage support if the objective is to expand SHGs' own productive scale rather than solely to widen and deepen their members' access to formal finance.

The paper also documents a distinct digital divide affecting SHG enterprises and delineates data limitations, particularly the sparse recording of employment and value added for groups whose primary recorded activity is financial intermediation rather than production, which both qualify the findings and point to specific directions, including finer activity coding and design-consistent weighting, for future research using this increasingly valuable survey instrument.

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Appendix A: Definitions of Variables

Variable	Definition
Self-help group (SHG) enterprise	Ownership type coded as self-help group
Rural	Sector code = rural
Registered	Enterprise registered under any act/authority
Has loan	Presence of an outstanding institutional loan (> 0)
Loan outstanding	Rupee value of total loan outstanding

Fixed assets owned	Sum of owned market value across asset categories
Annualised GVA	Factor-income value added, annualised over 12 months
Total workers	Total workers reported (paid or remunerated only for SHGs)
SHG membership size	Total group membership (SHG enterprises only)
Computer and internet use	Enterprise reports using a computer or the internet

Source: Author compilation from ASUSE data base