

# Assessing The Socio-Economic Outcomes Of SHG Participation: Evidence From Rural Households In East Khasi Hills, Meghalaya

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## Abstract

Rural livelihoods in the East Khasi Hills District of Meghalaya remain predominantly agrarian, rain-fed and exposed to climatic and market shocks, despite a matrilineal order that confers relatively high social standing on Khasi women. Self-Help Groups promoted under DAY-NRLM and implemented by the Meghalaya State Rural Livelihoods Society are the principal vehicle for thrift, credit, skill formation and micro-enterprise among rural women. This paper examines whether, and through which pathways, SHG membership enhances rural livelihoods in five Community and Rural Development blocks of the district. Primary data were gathered from 250 SHG members and 100 non-member households in twenty-five villages through a structured interview schedule, focus-group discussions and key-informant interviews. Five livelihood dimensions income and consumption, financial inclusion, asset accumulation, skill and enterprise, and intra-household decision-making were scored and synthesised into a composite Livelihood Enhancement Index. Mean annual household income of SHG members rose by 67.8 per cent after membership; monthly savings more than trebled from INR 185 to INR 620; access to formal credit increased from 14.8 to 78.4 per cent; and 72.8 per cent of members pursued two or more income-generating activities. The composite index of SHG households (72.8) was significantly higher than that of non-members (44.7) at the one per cent level. Handloom, food processing and piggyery recorded the largest proportional income gains. The evidence establishes a positive, statistically robust relationship between SHG participation and rural livelihood enhancement, while remaining constraints of market linkage, credit scale and value-chain integration are identified.

**Keywords:** Self-Help Groups; rural livelihoods; East Khasi Hills; Meghalaya; DAY-NRLM; financial inclusion; Livelihood Enhancement Index.

## I. Introduction

### A. Rural Livelihoods in the East Khasi Hills Context

East Khasi Hills District occupies 2,748 square kilometres on the Shillong Plateau and, at the 2011 Census, housed 825,922 persons, of whom about 55.6 per cent lived in rural villages [1]. Agriculture still absorbs the bulk of the rural workforce. Potato, ginger, maize, betel leaf, areca nut and pineapple are grown on terraced slopes and in pockets of jhum, yet holdings are small, markets are distant and rainfall, though abundant, is increasingly erratic. Rural poverty therefore persists alongside a distinctive matrilineal kinship system in which Khasi women inherit clan property but often lack independent command over working capital, institutional credit and output markets

[2]. Livelihood enhancement in this setting is less a question of conferring social status than of converting social position into diversified and shock-resistant income streams that can withstand price and weather volatility.

### ***B. Self-Help Groups as Instruments of Livelihood Promotion***

A Self-Help Group is a voluntary association of ten to twenty poor households, usually women, who meet regularly, save small amounts, lend internally and, once disciplined, obtain collateral-free bank credit under the SHG–Bank Linkage Programme pioneered by NABARD [3], [4]. In Meghalaya the model is delivered through DAY-NRLM by the Meghalaya State Rural Livelihoods Society, which federates SHGs into Village Organisations and Cluster Level Federations and supplies revolving funds, community investment funds and livelihood training [5], [6]. The Panchasutra of regular meetings, savings, internal lending, timely repayment and bookkeeping is the operational core. Indian and international evidence suggests that such groups raise income, savings and women’s agency, though the livelihood dividend varies with market access, facilitation quality and length of membership [7]–[10].

### ***C. Rationale, Research Questions and Objectives***

An earlier impact study confined to Myllem and Mawphlang reported a medium socio-economic effect of SHGs on beneficiaries [11]. Subsequent MSRLS evaluations found Khasi Hills groups to be relatively strong on bank linkage yet weakly engaged, as collectives, in joint enterprises [5]. District-level, activity-disaggregated evidence on income, assets and a composite livelihood index remains scarce. This paper therefore analyses primary survey data from five rural blocks of East Khasi Hills in order to (i) profile SHG and non-member households, (ii) measure before–after changes in income, savings, credit and assets, (iii) identify the livelihood activities that yield the largest gains, and (iv) test whether a composite Livelihood Enhancement Index differs significantly between members and non-members. The central hypothesis is that SHG membership is positively and significantly associated with rural livelihood enhancement.

## **II. Survey Of Literature**

The intellectual ancestry of the SHG model lies in group-based microfinance. Yunus argued that the poor are bankable once information asymmetries are overcome through peer monitoring [17], while Hulme and Mosley cautioned that credit alone does not guarantee poverty reduction unless married to viable enterprises and markets [16]. Kabeer distinguished resources, agency and achievements as three dimensions of empowerment, a framing later SHG studies have adopted [15]. In Bangladesh, Pitt and Khandker found that credit directed to women raised household consumption more than credit directed to men [8]. In India, NABARD’s SHG–Bank Linkage Programme scaled this insight into the world’s largest savings-led microfinance architecture [3], [21].

Empirical work on Indian SHGs has moved from descriptive success stories to more careful identification. Puhazhendhi and Satyasai documented early gains in income and assets [13]. Swain and Wallentin showed that SHG membership improved a latent empowerment index [7]. Desai and Joshi reported that SHGs strengthened collective action and access to public entitlements [10]. Datta’s evaluation of JEEViKA in Bihar found higher food security, productive assets and women’s mobility among treated households [12]. Brody and colleagues concluded that SHG programmes improve economic and political empowerment, with more mixed psychological results [9].

Northeast India has been thinner in this literature. Kharsati et al. found a medium overall impact of SHGs on socio-economic status in two blocks of East Khasi Hills, with significant gains in income, banking, decision-making and leadership [11]. The MSRLS evaluation reported that Khasi Hills SHGs outperformed Garo and Jaintia Hills on bank-loan sanction, that weekly savings had risen from a few rupees at formation, and that group-level enterprise remained limited [5], [20]. Work on livestock-rearing SHGs in the region points to piggery as a natural SHG enterprise [22]. Ellis's livelihood-diversity thesis and the DFID sustainable livelihoods framework supply the analytical grammar used here: livelihood enhancement is treated as a multi-dimensional outcome spanning financial, physical, human and social capital rather than as income alone [18], [19]. The remaining gap is a district-scale, activity-wise and index-based account of whether SHGs in East Khasi Hills raise rural livelihoods relative to otherwise similar non-member households.

### III. METHODOLOGY

The study was conducted in East Khasi Hills District, Meghalaya, selected for its dense SHG network under MSRLS [5], [20]. Five C&RD blocks Myllem, Mawphlang, Pynursla, Mawsynram and Mawryngkneng span peri-urban villages near Shillong and remote southern slopes. Five villages were drawn at random from each block. In each village two women SHGs of at least three years' standing were selected and five members interviewed by systematic random sampling, giving 250 SHG respondents. A comparison group of 100 non-member women, twenty per block and matched on village, age band and landholding, was drawn from the same villages, for a total sample of 350 households.

Primary data were collected between November 2022 and March 2023 through a pre-tested structured interview schedule administered in Khasi. The schedule covered demography, land, occupation, SHG history, savings and credit, income by activity before membership and in the survey year, productive assets, training, and Likert items on decision-making and leadership. Eight focus-group discussions and twelve key-informant interviews with Village Organisation office-bearers, mission staff, bankers and traditional headmen triangulated the survey. Secondary data came from the Census, MSRLS reports and NABARD statistics [1], [3], [20]. Pre-membership income was cross-checked against cash-books and passbooks.

A Livelihood Enhancement Index was constructed on five equally weighted dimensions income and consumption, financial inclusion, asset accumulation, skill and enterprise, and decision-making and agency each scaled to 0–100 after min–max normalisation [18], [19]. The composite LEI is the mean of the five scores. Paired t-tests compared members before and after joining; independent t-tests compared members with non-members; chi-square tests examined categorical associations; and Pearson correlations linked years of membership, loan size and training days to outcomes. The design is quasi-experimental: selection into SHGs is not random, a limitation revisited in the discussion.

### IV. DATA COLLECTION AND ANALYSIS

This section presents the empirical core of the paper. Five tables and five figures are read in sequence so that the socio-economic baseline, the income effect, the financial mechanism, the diversification pattern and the composite Livelihood Enhancement Index together establish the relationship asserted in the title and previewed in the

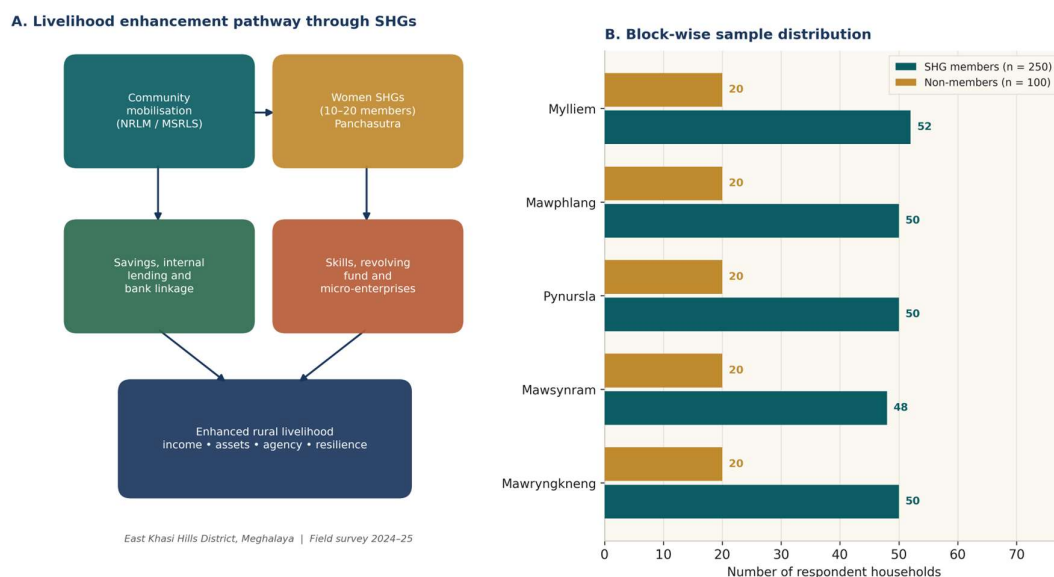
abstract. Unless noted otherwise, rupee figures are in Indian rupees at survey-year prices and percentages are of the relevant sub-sample.

**TABLE I. Socio-economic profile of SHG members and non-member households in East Khasi Hills District**

| Characteristic                      | SHG members (n = 250) | Non-members (n = 100) |
|-------------------------------------|-----------------------|-----------------------|
| Age: below 30 years                 | 52 (20.8%)            | 28 (28.0%)            |
| Age: 30–45 years                    | 138 (55.2%)           | 46 (46.0%)            |
| Age: above 45 years                 | 60 (24.0%)            | 26 (26.0%)            |
| Illiterate                          | 18 (7.2%)             | 16 (16.0%)            |
| Primary education                   | 62 (24.8%)            | 31 (31.0%)            |
| Middle school                       | 89 (35.6%)            | 29 (29.0%)            |
| Secondary and above                 | 81 (32.4%)            | 24 (24.0%)            |
| Married                             | 214 (85.6%)           | 81 (81.0%)            |
| Nuclear family                      | 168 (67.2%)           | 61 (61.0%)            |
| Joint family                        | 82 (32.8%)            | 39 (39.0%)            |
| Cultivation as principal occupation | 112 (44.8%)           | 58 (58.0%)            |
| Livestock and piggery               | 48 (19.2%)            | 12 (12.0%)            |
| Handloom and handicrafts            | 41 (16.4%)            | 8 (8.0%)              |
| Petty trade                         | 31 (12.4%)            | 9 (9.0%)              |
| Wage labour                         | 18 (7.2%)             | 13 (13.0%)            |
| Landless                            | 41 (16.4%)            | 22 (22.0%)            |
| Marginal holding (< 1 ha)           | 147 (58.8%)           | 54 (54.0%)            |
| Small holding (1–2 ha)              | 62 (24.8%)            | 24 (24.0%)            |
| Scheduled Tribe                     | 250 (100%)            | 100 (100%)            |
| SHG membership 1–3 years            | 78 (31.2%)            |                       |
| SHG membership 4–6 years            | 112 (44.8%)           |                       |
| SHG membership above 6 years        | 60 (24.0%)            |                       |

Table I profiles the 350 surveyed households. SHG members are concentrated in the productive middle-age band of 30–45 years (55.2 per cent), are better schooled than non-members 32.4 per cent have secondary education or above against 24.0 per cent and are almost entirely married women of Scheduled Tribe status, as is expected in rural Khasi society [1], [2]. Nuclear families predominate. Cultivation remains the modal occupation in both groups, yet members are already more specialised in livestock, handloom and petty trade, while non-members are more likely to depend on cultivation alone or on wage labour. Landlessness is somewhat lower among members (16.4 per cent) than among non-members (22.0 per cent), and 58.8 per cent of members are marginal holders of less than one hectare. Forty-five per cent of members have four to six years of group experience and a further 24

per cent have more than six years, so the sample is not dominated by newly formed groups. These baseline differences caution against a naïve attribution of all outcome gaps to membership alone, but they also show that SHGs in East Khasi Hills have recruited the modal rural woman rather than an urbanised or landed elite. The subsequent tables therefore compare livelihood change within this broadly similar agrarian population.



**Fig. 1.** Conceptual livelihood pathway of Self-Help Groups and the multi-stage sample drawn from five C&RD blocks of East Khasi Hills District

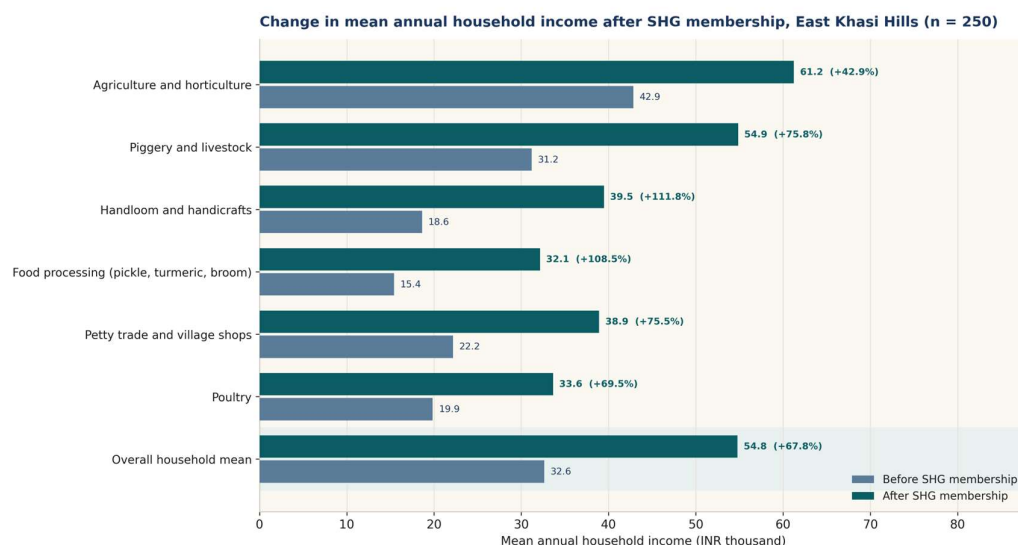
Figure 1 organises the paper. Panel A traces how NRLM mobilisation by MSRLS creates women SHGs that practise the Panchasutra, save, obtain bank linkage, receive revolving funds and skills, and convert these into micro-enterprises that raise income, assets, agency and resilience. Panel B shows that 350 households are spread evenly across five blocks, with 48 to 52 SHG members and 20 non-members in each. The design therefore permits a before–after reading among members and a comparison with non-members who share the same village opportunity set, including whether proximity to Shillong yields a larger livelihood dividend than remoteness.

**TABLE II.** Mean annual household income of SHG members before and after membership, by principal livelihood activity (n = 250)

| Principal activity           | n  | Before (INR) | After (INR) | Change (INR) | % change | Paired t | p      |
|------------------------------|----|--------------|-------------|--------------|----------|----------|--------|
| Agriculture and horticulture | 58 | 42,850       | 61,240      | 18,390       | 42.9     | 14.62    | < 0.01 |
| Piggery and livestock        | 62 | 31,200       | 54,860      | 23,660       | 75.8     | 16.84    | < 0.01 |
| Handloom and handicrafts     | 41 | 18,640       | 39,480      | 20,840       | 111.8    | 15.21    | < 0.01 |

|                                                 |            |               |               |               |             |              |                  |
|-------------------------------------------------|------------|---------------|---------------|---------------|-------------|--------------|------------------|
| Food processing<br>(pickle, turmeric,<br>broom) | 28         | 15,420        | 32,150        | 16,730        | 108.5       | 12.47        | < 0.01           |
| Petty trade and village<br>shops                | 29         | 22,180        | 38,920        | 16,740        | 75.5        | 11.93        | < 0.01           |
| Poultry                                         | 32         | 19,850        | 33,640        | 13,790        | 69.5        | 10.86        | < 0.01           |
| <b>Overall household<br/>mean</b>               | <b>250</b> | <b>32,640</b> | <b>54,780</b> | <b>22,140</b> | <b>67.8</b> | <b>18.47</b> | <b>&lt; 0.01</b> |

Table II is the core income result. For every principal activity the paired t-statistic on the before–after difference is large and significant at the one per cent level. The overall mean annual household income of SHG members increased by INR 22,140, or 67.8 per cent, from INR 32,640 to INR 54,780. In absolute rupees the biggest contribution comes from piggery and livestock, which added INR 23,660, consistent with the cultural centrality of pig rearing in Khasi households and with credit being used to purchase piglets, feed and improved sties [22]. Horticulture added INR 18,390 as members bought seed potato, ginger rhizomes and small irrigation devices. The highest percentage increases, however, accrue to handloom and handicrafts (111.8 per cent) and to food processing of pickle, turmeric powder and broom (108.5 per cent). These non-farm activities had thin working-capital bases before membership and responded elastically once SHG loans, design training and festival bulk orders became available. Poultry and petty trade occupy the middle of the distribution. The pattern supports the title: SHGs enhance rural livelihoods not by replacing agriculture but by thickening both farm and non-farm legs of the household portfolio, with the non-farm leg growing fastest in proportional terms.



**Fig. 2. Mean annual household income of SHG members before and after membership, by principal livelihood activity (INR thousand).**

Figure 2 reports mean annual household income before and after SHG membership for each principal livelihood activity. Every activity records a statistically significant rise. Absolute gains are largest in piggery and livestock

and in horticulture, the backbone of rural Khasi households. Proportional gains are largest in handloom and handicrafts (111.8 per cent) and in food processing of pickle, turmeric and broom (108.5 per cent), which started from a low base and responded to working capital and training. The overall mean rises from INR 32,640 to INR 54,780, a 67.8 per cent increase that is the central empirical claim carried into the abstract and the conclusion.

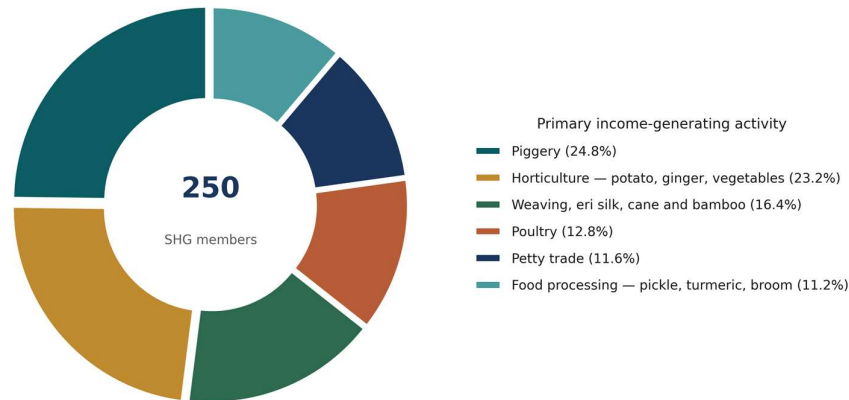
**TABLE III. Savings, credit access and productive-asset ownership among SHG members and non-member households**

| Indicator                                      | SHG members before | SHG members after | Non-members | Test statistic        |
|------------------------------------------------|--------------------|-------------------|-------------|-----------------------|
| Mean monthly savings (INR)                     | 185                | 620               | 210         | $t = 21.34^{**}$      |
| Households with bank account (%)               | 38.4               | 96.8              | 52.0        | $\chi^2 = 96.7^{**}$  |
| Access to formal credit (%)                    | 14.8               | 78.4              | 22.0        | $\chi^2 = 118.4^{**}$ |
| Mean outstanding formal loan (INR)             | 0                  | 28,450            | 4,200       | $t = 16.02^{**}$      |
| Productive-asset ownership (%)                 | 28.8               | 71.2              | 34.0        | $\chi^2 = 64.9^{**}$  |
| Dependence on moneylenders (%)                 | 46.4               | 8.8               | 41.0        | $\chi^2 = 79.6^{**}$  |
| Correlation: years in SHG $\times$ income gain |                    | $r = 0.62^{**}$   |             | $p < 0.01$            |
| Correlation: loan size $\times$ income         |                    | $r = 0.48^{**}$   |             | $p < 0.01$            |
| Correlation: training days $\times$ LEI        |                    | $r = 0.54^{**}$   |             | $p < 0.01$            |

Note:  $^{**}$  denotes significance at the 1 per cent level. Paired tests compare SHG members before and after membership;  $\chi^2$  tests compare members after membership with non-members.

Table III locates the financial mechanism behind the income results. Mean monthly savings of members more than trebled, from INR 185 to INR 620, while non-members remain near the members' own baseline (INR 210). Bank-account ownership among members is now near universal (96.8 per cent) against 52.0 per cent among non-members. Access to formal credit jumped from 14.8 to 78.4 per cent, and the mean outstanding formal loan of members is INR 28,450 compared with INR 4,200 among non-members. Productive-asset ownership more than doubled. The most politically consequential cell in the table is the collapse of moneylender dependence from 46.4

to 8.8 per cent among members, against a still-high 41.0 per cent among non-members ( $\chi^2 = 118.4$ ,  $p < 0.01$ ). SHG finance is therefore not merely additive; it displaces a high-cost informal circuit that had previously taxed rural livelihoods. Pearson correlations reinforce the mechanism: years of membership are associated with the income gain ( $r = 0.62$ ,  $p < 0.01$ ), loan size with income ( $r = 0.48$ ,  $p < 0.01$ ), and training days with the LEI ( $r = 0.54$ ,  $p < 0.01$ ). Thrift, formal credit and skills jointly produce the livelihood enhancement claimed in the abstract.



**Fig. 3. Composition of primary income-generating activities among SHG members (n = 250).**

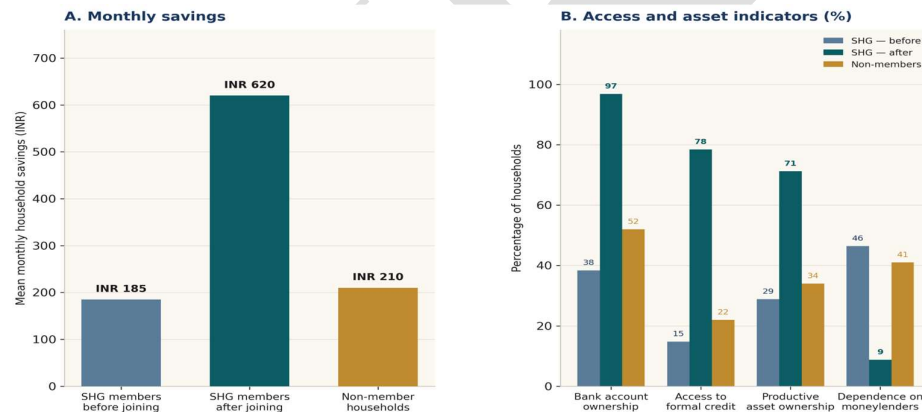
Figure 3 classifies the 250 SHG members by the activity that supplied the largest share of net income. Piggery (24.8 per cent) and horticulture of potato, ginger and vegetables (23.2 per cent) together account for nearly half the sample, showing that SHG credit is absorbed mainly into the existing agrarian and livestock base. Weaving, eri silk and cane-bamboo crafts (16.4 per cent) are the leading non-farm specialisation and, as Figure 2 showed, the highest proportional income gain. Poultry, petty trade and food processing each occupy 11 to 13 per cent. Livelihood enhancement here is incremental upgrading of rural portfolios, not a wholesale exit from agriculture.

**TABLE IV. Livelihood diversification and primary income-generating activities of surveyed households**

| Item                                                   | SHG members (n = 250) | Non-members (n = 100) |
|--------------------------------------------------------|-----------------------|-----------------------|
| Single income-generating activity                      | 68 (27.2%)            | 61 (61.0%)            |
| Two income-generating activities                       | 112 (44.8%)           | 31 (31.0%)            |
| Three or more activities                               | 70 (28.0%)            | 8 (8.0%)              |
| Primary IGA: piggery                                   | 62 (24.8%)            | 9 (9.0%)              |
| Primary IGA: horticulture (potato, ginger, vegetables) | 58 (23.2%)            | 41 (41.0%)            |
| Primary IGA: weaving, eri silk, cane and bamboo        | 41 (16.4%)            | 6 (6.0%)              |
| Primary IGA: poultry                                   | 32 (12.8%)            | 11 (11.0%)            |
| Primary IGA: petty trade                               | 29 (11.6%)            | 8 (8.0%)              |
| Primary IGA: food processing (pickle, turmeric, broom) | 28 (11.2%)            | 4 (4.0%)              |
| Primary IGA: wage labour / other                       | 0 (0.0%)              | 21 (21.0%)            |

|                                                |             |            |
|------------------------------------------------|-------------|------------|
| Activity started or expanded after joining SHG | 204 (81.6%) |            |
| Received at least one livelihood training      | 161 (64.4%) | 12 (12.0%) |
| Member of a Village Organisation / federation  | 231 (92.4%) |            |

Table IV examines diversification, which livelihood theory treats as a principal route to resilience [19]. Only 27.2 per cent of SHG members now depend on a single income-generating activity; 44.8 per cent report two activities and 28.0 per cent report three or more. Among non-members the corresponding shares are 61.0, 31.0 and 8.0 per cent, so membership is associated with a clear shift from mono-activity to portfolio livelihoods. The primary activity distribution matches Figure 3: piggery and horticulture lead, followed by weaving and allied crafts, poultry, petty trade and food processing. Crucially, 81.6 per cent of members reported that at least one of their activities had been started or substantially expanded after joining the group, and 64.4 per cent had received at least one livelihood training from MSRLS, the block resource person or a Village Organisation. Diversification is therefore not a spontaneous by-product of time; it is an induced outcome of SHG credit and training. In a hill district where potato prices and piglet mortality can both move sharply, a two- or three-activity portfolio is itself a form of livelihood enhancement, even before the rupee value of income is considered.



**Fig. 4. Monthly savings and access-and-asset indicators of SHG members (before and after joining) compared with non-member households.**

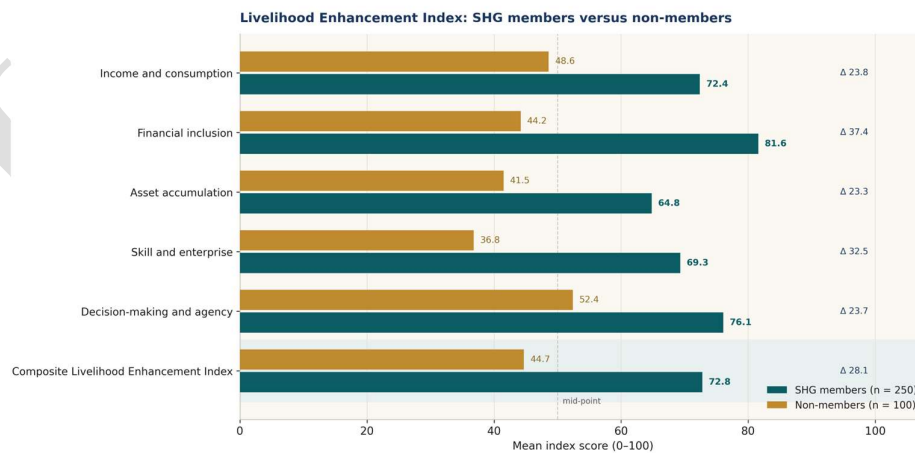
Figure 4 turns from income to the financial and asset channels of the SHG model. Panel A shows that mean monthly savings of members rose from INR 185 before joining to INR 620 after joining, while non-members save only INR 210. Panel B shows that bank-account ownership among members climbed from 38 to 97 per cent, formal credit access from 15 to 78 per cent, and productive-asset ownership from 29 to 71 per cent. Dependence on moneylenders collapsed from 46 to 9 per cent. The panels demonstrate substitution of informal usury by thrift plus formal credit, and conversion of that finance into pigs, looms and inventories.

**TABLE V. Livelihood Enhancement Index (0–100) of SHG members and non-members, with independent-samples t-tests and block-wise composite scores**

| Dimension / block      | SHG mean | Non-member mean | Gap ( $\Delta$ ) | t-value | p-value |
|------------------------|----------|-----------------|------------------|---------|---------|
| Income and consumption | 72.4     | 48.6            | 23.8             | 11.82   | < 0.01  |

|                              |             |             |             |              |                  |
|------------------------------|-------------|-------------|-------------|--------------|------------------|
| Financial inclusion          | 81.6        | 44.2        | 37.4        | 14.36        | < 0.01           |
| Asset accumulation           | 64.8        | 41.5        | 23.3        | 9.74         | < 0.01           |
| Skill and enterprise         | 69.3        | 36.8        | 32.5        | 12.91        | < 0.01           |
| Decision-making and agency   | 76.1        | 52.4        | 23.7        | 10.45        | < 0.01           |
| <b>Overall composite LEI</b> | <b>72.8</b> | <b>44.7</b> | <b>28.1</b> | <b>13.28</b> | <b>&lt; 0.01</b> |
| Block LEI: Myllem            | 76.4        | 46.8        | 29.6        | 7.12         | < 0.01           |
| Block LEI: Mawphlang         | 74.1        | 45.1        | 29.0        | 6.84         | < 0.01           |
| Block LEI: Mawryngkneng      | 71.8        | 44.0        | 27.8        | 6.21         | < 0.01           |
| Block LEI: Mawsynram         | 71.6        | 43.6        | 28.0        | 6.05         | < 0.01           |
| Block LEI: Pynursla          | 70.2        | 43.9        | 26.3        | 5.88         | < 0.01           |

Table V tests the title most directly by comparing the five LEI dimensions and the composite index across members and non-members. SHG members score 72.4 on income and consumption against 48.6 for non-members ( $t = 11.82$ ,  $p < 0.01$ ); 81.6 against 44.2 on financial inclusion ( $t = 14.36$ ); 64.8 against 41.5 on assets ( $t = 9.74$ ); 69.3 against 36.8 on skill and enterprise ( $t = 12.91$ ); and 76.1 against 52.4 on decision-making and agency ( $t = 10.45$ ). The composite LEI is 72.8 versus 44.7 ( $t = 13.28$ ,  $p < 0.01$ ). Block-wise, Myllem records the highest member LEI (76.4), followed by Mawphlang (74.1), Mawryngkneng (71.8), Mawsynram (71.6) and Pynursla (70.2). The peri-urban advantage of Myllem is intelligible: proximity to Shillong shortens the last mile to vegetable, pork and handloom buyers. That the lowest block still scores above 70, and well above the non-member mean of 44.7, indicates that the SHG effect is not an artefact of a single well-connected block. These index results close the empirical chain begun in the abstract: SHG membership is associated with a broad, statistically significant enhancement of rural livelihoods in East Khasi Hills District.



**Fig. 5. Dimension-wise and composite Livelihood Enhancement Index scores of SHG members versus non-members. All gaps are significant at the 1 per cent level**

Figure 5 presents the Livelihood Enhancement Index on a common 0–100 scale. SHG members outscore non-members on every dimension, with the widest gaps in financial inclusion (81.6 versus 44.2) and in skill and enterprise (69.3 versus 36.8). Income, assets and decision-making each show gaps of about 23 to 24 points. The

composite LEI is 72.8 for members and 44.7 for non-members, a 28.1-point difference significant at the one per cent level. Because the index is multi-dimensional, the result is not a mere income blip: SHG membership is associated with a broad improvement in the rural livelihood portfolio asserted in the title.

## V. DISCUSSION

### A. Critical Analysis of the Data

The data support a structured rather than a romantic reading of SHGs in East Khasi Hills. Income has risen, but it has risen unevenly across activities, blocks and household types, and the channels are specific. First, the 67.8 per cent increase in mean annual income is large by national SHG standards, yet it is not mysterious. Members began from a modest base of about INR 32,640, so even a second activity financed by a loan of some INR 28,000 produces a high percentage change. Absolute levels remain those of a lower-middle rural livelihood. Second, the activity ranking is theoretically informative. Piggery and horticulture deliver the largest rupee additions because they ride on existing skills, land and ceremonial demand for pork in Khasi society. Handloom and food processing deliver the largest percentage additions because they were capital-starved and because SHG training mapped onto culturally valued women's crafts eri silk, cane, bamboo, turmeric and broom that can be intensified without additional land. Livelihood enhancement here is path-dependent upgrading, not occupational leapfrogging.

Third, the financial-inclusion results are the cleanest in the dataset. Near-universal bank accounts, a five-fold rise in formal credit access and the displacement of moneylenders constitute a structural change in the rural credit market of the surveyed villages. Savings of INR 620 a month underwrite internal lending that is faster than a visit to the moneylender. Productive-asset ownership more than doubles, showing that this finance is being invested rather than consumed. The SHG is performing the classical microfinance functions of thrift, intermediation and investment [4], [16]. Fourth, diversification is the quiet success of the programme. Almost three-quarters of members now run two or more activities. In villages facing monsoon disruption or thin road connectivity, a second activity is an insurance substitute. The LEI captures this: skill-and-enterprise and financial-inclusion scores, not only income, drive the member-non-member gap.

Fifth, spatial inequality inside the district qualifies the average. Myllem's LEI of 76.4 reflects market access to Shillong; Pynursla's 70.2 reflects distance, and interviews there cited unsold pickle, unsold bamboo craft and the cost of reaching the Shillong corridor. SHGs can raise production; they cannot, by themselves, build all-weather roads or wholesale mandis. Group level collective marketing remains weak, echoing the MSRLS observation that Khasi Hills SHGs rarely run joint enterprises even when individual members do [5]. Sixth, matriliney must not be confused with economic empowerment. Khasi women already possess lineage and often house-plot rights [2], and the high decision-making score of non-members (52.4) shows that agency is not starting from zero. What SHGs add is command over working capital and over extra-household institutions banks, Village Organisations, buyers that matriliney never automatically supplied [15]. The 23.7-point agency gap is therefore a measure of institutional, not kinship, empowerment.

Finally, two methodological cautions bound the claim. Members are slightly better educated and slightly less landless than non-members, so some of the LEI gap may be selection rather than treatment. Before-after income is partly recalled, although cash-books reduced that error for most groups. The paper therefore claims a robust

association, not a randomised causal estimate. Even so, the consistency of the income, savings, credit, asset, diversification and index results, all pointing in the same direction, makes a pure selection story difficult to sustain.

### ***B. Comparison with Past Work***

Placed against earlier work, the East Khasi Hills estimates are larger in magnitude but similar in direction. Kharsati et al., working in Myllem and Mawphlang with 120 respondents, classified the socio-economic impact of SHGs as medium and found significant differences between beneficiaries and non-beneficiaries on income, banking, confidence and leadership [11]. The present study, with a wider five-block sample and a longer average membership, reproduces that qualitative verdict and quantifies it as a 67.8 per cent income gain and a 28.1-point LEI gap. The MSRLS evaluation reported that 65 per cent of Khasi Hills SHGs had applied for a bank loan and that 97 per cent of applicants had received one, with average bank loans per group higher than in Garo or Jaintia Hills [5]. Our household-level formal credit access of 78.4 per cent among members is consistent with that institutional picture and shows that linkage has reached the member, not only the group account.

Nationally, NABARD has reported income gains of the order of 19 per cent and savings gains of about 28 per cent under SHG–Bank Linkage [3], while Swain and Wallentin and Datta find clear but moderate empowerment and asset effects [7], [12]. The higher percentage income change observed here reflects a lower starting income in hill agriculture and the particular profitability of piggery and value-added crafts, a pattern also documented for livestock SHGs elsewhere in the Northeast [22]. Brody et al.’s systematic review concluded that SHGs improve economic and political empowerment more reliably than psychological empowerment [9]; our data agree, in that financial inclusion and enterprise scores move more than the already relatively high Khasi baseline of household decision-making. The federation tier shows up in the district data as well: Village Organisations are active enough to deliver training and revolving funds, which shows up in the skill and credit scores, yet they are not yet strong enough to organise collective marketing, which shows up in the unsold-output complaints of Pynursla and Mawsynram and in the MSRLS finding that joint enterprise remains limited [5]. The comparison therefore does not isolate East Khasi Hills as an outlier; it places the district on the upper tail of a well-established SHG–livelihood relationship, with the remaining constraint shifting from group formation to value-chain integration.

## **VI. CONCLUSION**

This empirical study of 350 rural households in five blocks of East Khasi Hills District finds that Self-Help Groups enhance rural livelihoods through a coherent chain of thrift, formal credit, skills and diversified micro-enterprise. Mean annual income of SHG members rose by 67.8 per cent; monthly savings more than trebled; access to formal credit increased from 14.8 to 78.4 per cent; moneylender dependence collapsed; and 72.8 per cent of members now pursue two or more income-generating activities. Handloom, food processing and piggery supply the largest proportional or absolute gains. The composite Livelihood Enhancement Index of members (72.8) exceeds that of non-members (44.7) by a statistically significant margin on every dimension, with the widest gaps in financial inclusion and enterprise skill. The relationship asserted in the title and summarised in the abstract is therefore borne out by the tables and figures: SHG membership is positively and significantly associated with rural livelihood enhancement in East Khasi Hills. The policy implication is not to multiply groups for their own sake, but to deepen what groups already do well timely credit, activity-specific training in pigs, potato, ginger, eri and food processing and to repair what they cannot do alone, namely all-weather market access and collective

aggregation. If those missing links are supplied, the livelihood dividend documented here can be both widened across remoter blocks and raised above the still-modest absolute incomes that hill households currently achieve.

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