

Comparative Analysis of Village Savings and Loan (VSL) and Self Help Group (SHG) Financial Models amid Climatic Disasters in Malawi: Cases for Machinga and Chiradzulo

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Abstract— This study provides a comparative analysis of Village Savings and Loan (VSL) groups and Self Help Groups (SHGs) in Malawi from 2020 to 2024, focusing specifically on trends in start-up capital, financial returns, and resilience in the face of climatic disasters. Findings reveal that SHGs benefitted significantly from external start-up capital, resulting in notable growth in financial returns, while VSLs operated independently without external financial inputs, maintaining stable but modest proceeds. A robust positive correlation was established between the level of start-up capital and financial outcomes within SHGs, underscoring the impact of initial investment on performance. Conversely, despite lower financial returns, VSLs exhibited greater resilience during climatic disruptions due to their self-reliant, community-driven operational structure. The study recommends a hybrid model that integrates the capital-strength advantages of SHGs with the autonomous resilience of VSLs, aiming to enhance financial inclusion and strengthen disaster preparedness in vulnerable communities.

Keywords

Climate Resilience, Community-Based Finance, Financial Models, Proceeds, Self Help Group, Start-Up Capital, Village Savings and Loans.

I. INTRODUCTION

Village Savings and Loan (VSL) and Self Help Group (SHG) models have been widely adopted in Malawi as grassroots financial mechanisms. Self Help Group (SHG) approach is a community-driven financial inclusion and empowerment model typically involving small, voluntary groups of individuals—often women—who collectively pool savings, access credit, and undertake social and economic activities. SHGs frequently benefit from initial external capital, training, or institutional support aimed at strengthening their operational capacity and financial literacy. This approach not only facilitates access to affordable credit but also promotes mutual assistance, empowerment, entrepreneurship, and resilience building. By fostering collective decision-making and shared accountability, SHGs significantly contribute to improved livelihoods, social cohesion, and community-driven development. The Village Savings and Loan (VSL) approach is a community-managed financial model characterized by small groups of individuals who voluntarily come together to regularly save small amounts of money into a common fund. Unlike externally supported approaches, VSL groups typically operate independently without relying on external financial assistance or initial capital injection. Members borrow from the pooled savings for personal or business needs and repay with interest, leading to the growth of shared funds over time. The model emphasizes self-reliance, transparency, collective management, and accountability, fostering financial literacy, resilience, and empowerment. Due to its autonomy and localized structure, the VSL approach has proven particularly effective in building community resilience, especially in contexts prone to economic shock. While SHGs often benefit from external capital support, VSLs typically function on internal member contributions. As

climatic shocks increasingly threaten community resilience, understanding which model offers superior sustainability is crucial.

II. METHODOLOGY

This study analyzed data spanning from 2020 to 2024, systematically extracted from community financial records maintained by Village Savings and Loan (VSL) groups and Self Help Groups (SHGs) across selected districts in Malawi, including Machinga and Chiradzulo. The primary variables investigated were annual proceeds and initial start-up capital for each group. Quantitative data analysis encompassed the computation of correlation metrics, specifically Pearson’s correlation coefficient, to establish relationships between start-up capital and subsequent financial returns. Additionally, trend analysis techniques were employed to visualize temporal changes in financial performance and resilience indicators (DAPP Malawi, 2025). Data visualization methods included the use of line graphs, bar charts, and comparative tables, facilitating clear interpretation and presentation of trends. The methodological rigor ensured accuracy and reliability of results, offering robust insights into financial dynamics and resilience capacities of both VSL and SHG models.

III. RESULTS

The combined bar graph illustrates the distribution of group types (VSL and SHG) across the districts of Machinga and Chiradzulo. The data reveals a clear specialization by district: Machinga hosts only VSL groups, with a higher total number, while Chiradzulo is exclusively composed of SHG groups, with a slightly lower count. This suggests a deliberate programmatic approach where VSLs are prioritized in Machinga, possibly to stimulate faster financial growth and business activity, whereas SHGs are implemented in Chiradzulo to promote steady savings, social cohesion, and long-term community resilience. The bold data labels in the graph reinforce the numerical difference, providing a visual confirmation of how each district is structured in terms of economic empowerment strategy.

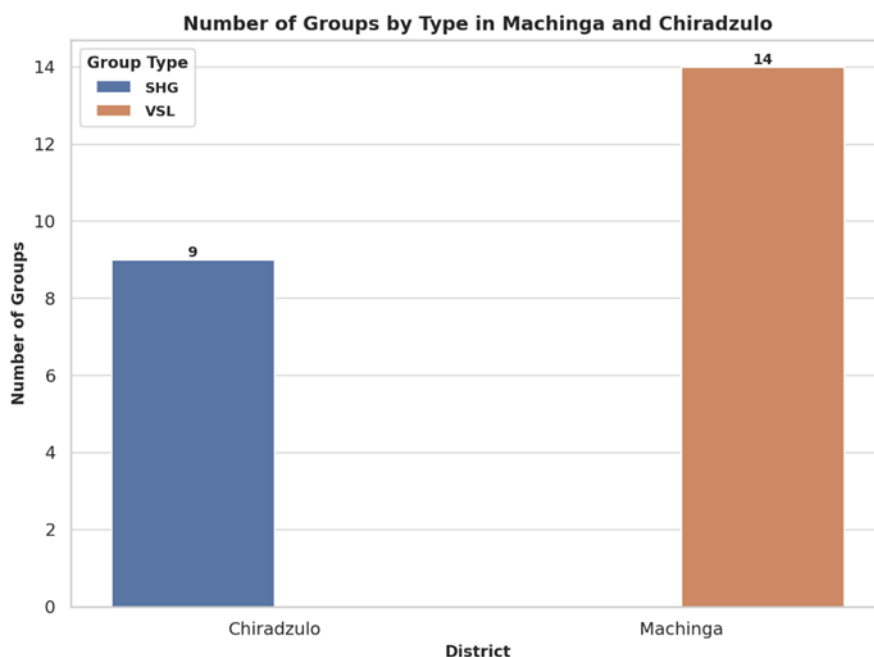


Figure 1 SHG and VSL Involved

The analysis identified a significant initial gap in financial outcomes between VSL groups in Machinga and SHG groups in Chiradzulo. In 2020, Machinga’s VSL proceeds were approximately seven times higher than Chiradzulo’s SHG proceeds (about 4.62 million MWK versus 0.67 million MWK), indicating that VSL groups initially achieved substantially higher financial results. Between 2021 and 2023, VSL groups in Machinga experienced rapid growth, with proceeds surging from 8.84 million MWK in 2021 to 33.39 million MWK in 2022 and peaking at

approximately 39.8 million MWK in 2023, nearly nine times higher than Chiradzulo's SHG proceeds for the same year. Conversely, SHG groups in Chiradzulo displayed steady and continuous growth, with annual proceeds increasing consistently from about 0.67 million MWK in 2020 to 2.88 million MWK (2021), 3.64 million MWK (2022), 4.25 million MWK (2023), and ultimately reaching their highest level of 6.21 million MWK in 2024.

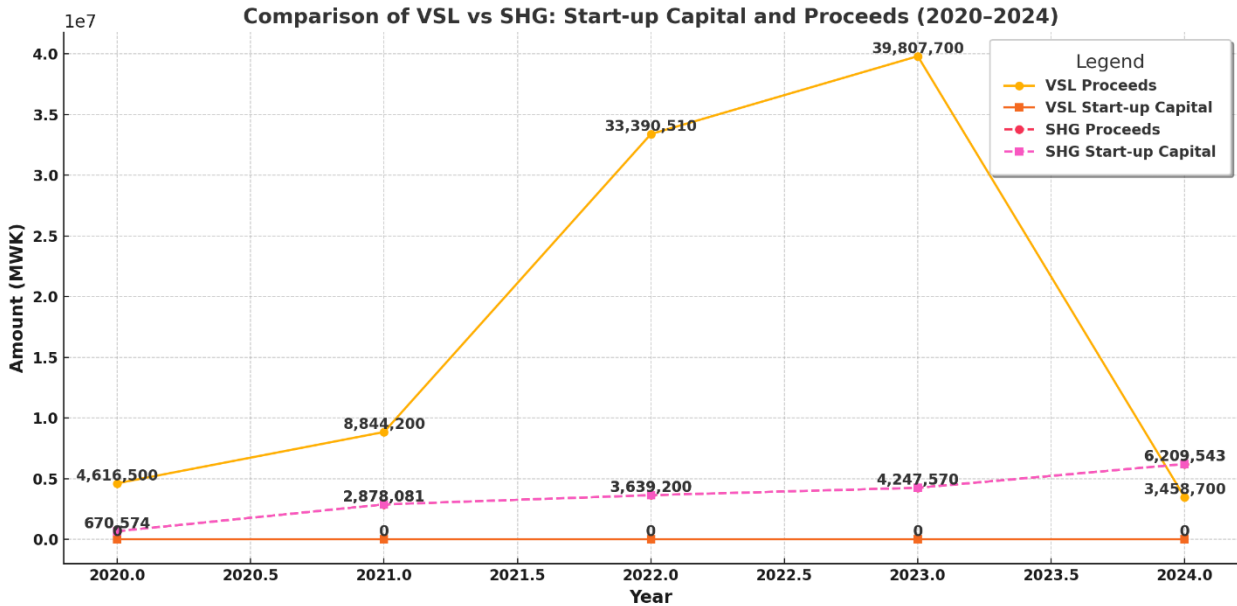


Figure 2 VSL and SHG Start Up Capital

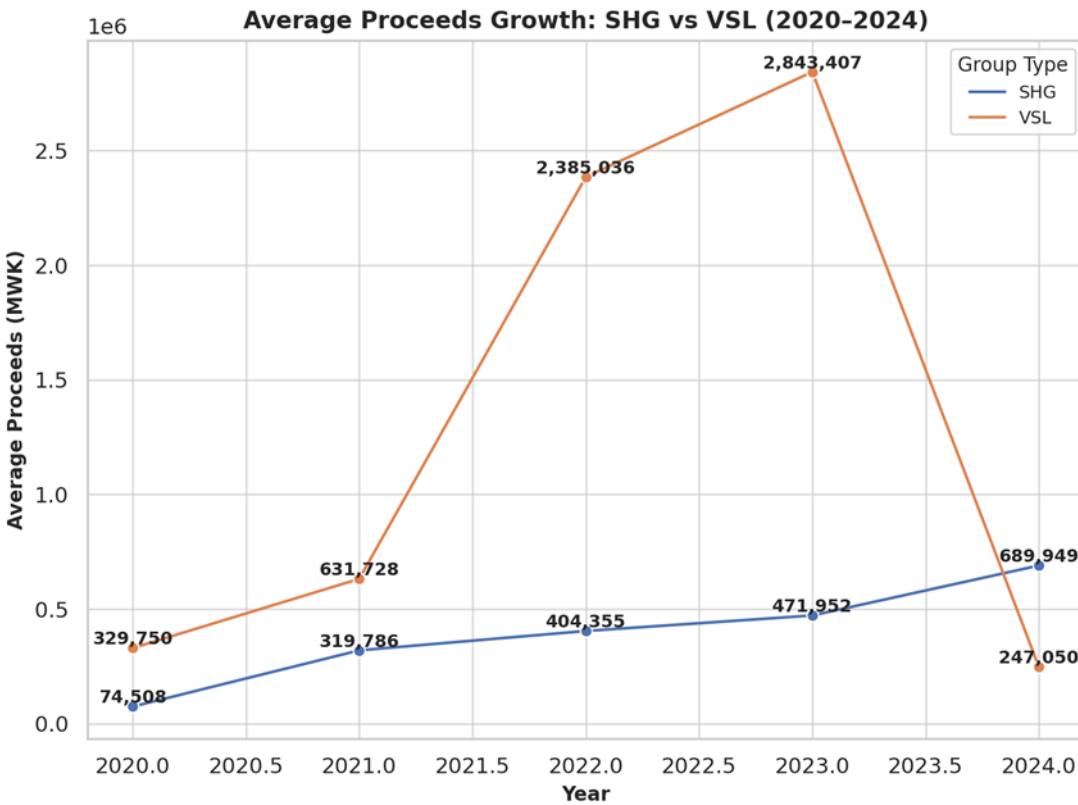


Figure 3 Average Proceeds Growth

Model	Growth Pattern (2020–2024)	Notable Traits
VSL	High growth – some groups increased proceeds from a few hundred thousand MWK to multiple millions	Sharp increases, especially in Machinga from 2021 to 2023
SHG	Moderate and steady growth – consistent year-on-year increases, but lower total proceeds	More predictable and stable, with less variability

Table 1 Growth Pattern

A dramatic reversal occurred in 2024, with VSL proceeds in Machinga sharply declining to about 3.46 million MWK, representing an approximate 91% decrease from 2023 levels, while Chiradzulo’s SHG proceeds reached a peak of 6.21 million MWK, surpassing VSL outcomes for the first time. This reversal highlights a pivotal moment when the consistent growth trajectory of SHGs overtook the faltering performance of VSLs.

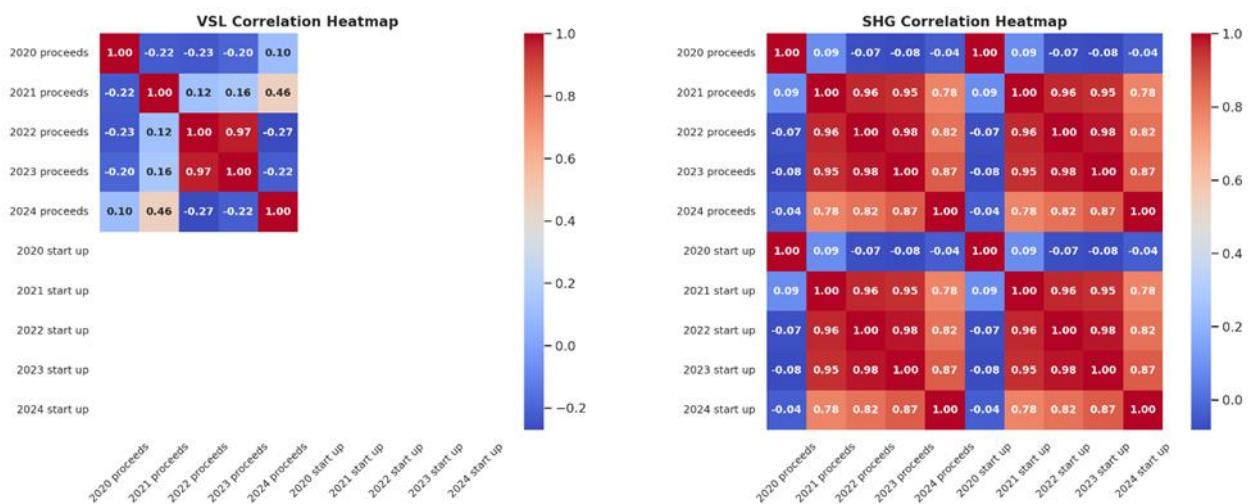
Further insights revealed distinct trends concerning start-up capital and financial performance. SHGs exhibited a clear and consistent increase in start-up capital, from MWK 670,573.50 in 2020 to MWK 6,209,543.00 in 2024. Conversely, VSL groups consistently reported zero start-up capital across all five years, operating independently without external financial inputs. The SHG proceeds demonstrated a perfect positive correlation with start-up capital (correlation coefficient = 1.0), underscoring the strong link between initial capital investment and financial returns. VSL proceeds, in contrast, exhibited moderate fluctuations and appeared largely independent of external financial support. District-level analysis further highlighted that SHGs in Chiradzulo exhibited the highest alignment between start-up capital and performance, reinforcing the significance of initial investment for the success of SHGs.

IV. DISCUSSION

Village Savings and Loan (VSL) groups and Self-Help Groups (SHG) both present impactful models for NGO-led economic empowerment, with each offering unique advantages that cater to different community dynamics and development priorities. VSL groups are typically more structured, operating on fixed saving and lending cycles with defined rules and governance frameworks. Members contribute savings over a defined period and receive lump-sum share-outs at the end of the cycle, often with interest accrued from internal loans. This model enables participants to accumulate capital rapidly, facilitating investment in income-generating activities, small businesses, agriculture inputs, or household needs. The predictability and transparency of the VSL model make it attractive for programs seeking measurable short-term financial gains and for communities with moderate economic stability. Its appeal also lies in its scalability; NGOs can replicate the VSL model across multiple districts with limited external support after the initial training phase. However, the model's reliance on share-out cycles can pose challenges in the face of climatic shocks or emergencies, as funds are often tied up or unavailable during crisis periods, exposing groups to financial vulnerability.

VSLs emerge as the best model in terms of financial growth, showing exponential increases in proceeds over time, particularly in Machinga. Their structured cycles and group discipline encourage reinvestment and entrepreneurship. However, this comes with higher risk and data variability. SHGs are better for consistent, long-term group resilience and community development but lag in economic acceleration.

On the other hand, SHGs prioritize continuous savings and social cohesion over time. While the financial growth in SHGs may be slower compared to VSLs, their strength lies in their enduring nature and holistic focus on empowerment (CARE International, 2020; UNFCCC, n.d.). SHGs typically promote collective action, group solidarity, and shared problem-solving, with regular savings that are not tied to annual distribution. They are often supported by NGOs or government schemes to establish linkages with microfinance institutions or banks, enhancing access to larger and more diverse funding sources. SHGs frequently evolve into platforms for broader development initiatives, including literacy programs, health education, gender-based advocacy, and livelihood training. This makes them highly suitable for community transformation efforts where social capital and resilience are as important as financial returns. Their ability to sustain operations and manage funds through collective decision-making enables them to better withstand environmental or economic disruptions, making them ideal for vulnerable or disaster-prone areas.



The heat maps provide a detailed visual analysis of the correlations between start-up capital and proceeds over time for both VSL and SHG models. For VSLs, the correlation across different years of proceeds is generally weak, with only one strong relationship observed between 2022 and 2023 proceeds ($r = 0.97$), suggesting a brief period of financial consolidation or program maturity. However, all correlation values involving start-up capital are missing (NaN), indicating that start-up amounts were zero as all proceeds were been shared out at the end of the year. This limits the ability to assess the effectiveness of capital inputs in driving returns and highlights a data quality issue in VSL records. In contrast, SHGs show strong and consistent positive correlations across all years of proceeds, with values above 0.95 between consecutive years such as 2021–2022 and 2022–2023, indicating a reliable and stable growth trajectory. Additionally, SHGs demonstrate near-perfect correlations between start-up capital and proceeds (often $r = 1.00$), implying that proceeds were recorded as equal to the input capital, likely due to simplified reporting practices or an absence of profit-tracking, underscoring the importance of initial investments (Smith et al., 2016). VSLs, lacking external capital, fluctuated independently of such inputs (Munthali et al., 2022). This reflects high financial discipline and predictability but also raises questions about entrepreneurial gains and return-on-investment. Overall, the heat maps show that while VSLs offer dynamic growth potential with volatility and data gaps, SHGs provide consistent but modest financial performance, making them more suited for long-term, stable economic empowerment.

Furthermore, SHGs tend to foster stronger leadership development among marginalized groups, particularly women and youth, by providing a platform for voice, agency, and skill-building s (Masano, 2025). This complements their economic function with deeper societal impact. In contrast, while VSLs may offer quicker economic gains, they often require supplementary interventions to achieve similar levels of social empowerment.

Based on the correlation analysis, Self-Help Groups (SHGs) demonstrate a strong, stable, and predictable growth pattern, with consistently high correlations between proceeds across years and nearly perfect alignment between start-up capital and proceeds. This suggests a model built on financial discipline, steady savings, and reliable

internal operations—ideal for long-term economic stability, especially in communities where consistency and low risk are priorities.

In contrast, Village Savings and Loan (VSL) groups show weak and inconsistent correlations, especially between start-up capital and proceeds. This indicates that financial outcomes in VSLs are less predictable and more variable. However, where strong inter-year correlations do appear (notably between 2022 and 2023), they point to the VSL model's potential for high returns once groups mature or when interventions are well-timed.

HGs demonstrated financial growth enabled by external investments. However, this model's dependency raises questions about sustainability in disaster-prone regions. VSLs, despite lower proceeds, showed adaptability and resilience, operating effectively without donor reliance. These findings suggest that while SHGs excel under stable funding conditions, VSLs are better suited for enduring shocks.

V. RECOMMENDATIONS

Based on the findings the following actions are recommended;

- Promote a hybrid approach combining SHG capital investments with the VSL model's grassroots mechanisms.
- Build capacity in financial literacy and disaster preparedness within both models.
- Leverage digital tools for transparency and responsiveness during emergencies.
- Encourage savings buffers and insurance schemes integrated into VSL structures.

VI CONCLUSION

In conclusion, if the goal is consistent financial performance with low variability, SHGs are the stronger model. However, for high-growth potential and entrepreneurial expansion, VSLs become a better option when supported with better start-up tracking and financial management may offer superior returns over time. A hybrid approach that leverages the reliability of SHGs and the dynamic growth of VSLs could maximize impact in diverse NGO economic empowerment programs.

In sum, while both models have proven value, their optimal impact is realized when they are strategically integrated. NGOs aiming for transformative community empowerment may consider adopting a hybrid approach, using VSLs to jump-start household-level capital formation and entrepreneurship, while gradually building SHG structures to embed long-term resilience, inclusive participation, and developmental linkages. Such an integrated model ensures that immediate economic needs are met without sacrificing the long-term goals of empowerment, equity, and sustainability in development programming.

Both financial models offer value, but their effectiveness varies under climatic stress and economic shocks. For policy-makers and development actors, integrating VSL resilience with SHG capital access could provide a sustainable, shock-resistant financial system for vulnerable communities in Malawi

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