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An Investigation on the Effect of Savings and Internal Lending Communities Participation on Poverty Reduction among Informal Operators in Shangai Informal Settlement Mpika – Zambia

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Abstract:

Social protection comprises policies and programmes that are put in place in order to reduce the lifelong consequences that negatively affect society's well-being. About 4 billion people around the world are not on social protection programmes provided by the government (ILO, 2020). They are either on private formal or traditional and informal mechanisms such as Savings and Internal Lending Communities (SILC). The participation in SILC in several studies has indicated that the participants had alleviated poverty through asset accumulation. However, the effect of SILC participation by informal operators in Shangai informal settlements on poverty reduction has not been documented, hence this study. The specific objectives of the study were to characterize and determine the effect of Savings and Internal Lending Communities' participation in poverty reduction among informal operators in Shangai informal settlements. The study employed a descriptive research design with a sample size of 112 randomly selected. Questionnaires were used to collect quantitative data. The quantitative data was analyzed and presented as means, frequency and percentages. Examination of the effects of SILC participation and poverty reduction was done using an independent t-test and Binary logistic regression with a $p < 0.05$ as a criterion of Statistical significance. Results showed that participation in SILC led to poverty reduction through the accumulation of sponge mattresses and beds. Therefore, this study recommends that the government build SILC groups as viable social protection coverage for the informal sector.

Keywords: Social protection, informal sector, poverty reduction, savings and internal lending communities (SILCs), well-being

1. Background

Savings and Internal Lending Communities (SILC) are a kind of informal social security mechanism practised across the globe in areas such as Latin America, the Middle East, and some parts of Asia (Kim, 2001). On the African continent, SILC is mainly practised in East, West, Central and Southern Africa (Vanmeenen, 2010). In Zambia, SILC groups are dotted across the country (Catholic Diocese of Ndola, 2018). The practice has emerged as a means of enhancing social security by mitigating the impacts of livelihood shocks and stress among the low-income groups (Kim, 2001).

55 percent of the world population is not covered by formal social protection programmes (International Labour Organization [ILO], 2020). According to ILO (2019), Europe and Central Asia have developed social protection systems compared to other areas. However, Australia has a well-structured and more developed social protection scheme that provides extensive protection to all its citizens. In America, only about 67.6 percent of the population is effectively covered, whereas in the Pacific region and Asia, only 38.9 percent of the population is covered (ILO, 2020). In Africa, a huge proportion of the population does not benefit from government social protection. It is estimated that in Sub-Saharan Africa, only 10 percent of the population is covered by statutory social security schemes (ILO, 2017). In Zambia, social protection has continued to be fragmented, uncoordinated, and poorly resourced, and informal operators have been excluded (Ministry of Community Development, Mother and Child Health [MCDMCH], 2014).

All people throughout human history have faced uncertainty brought about by unemployment, poverty, death, illness, disability and old age (Kalusompa, Dicks, & Boatery, 2009). Among the urban informal operators, the great majority are self-employed or working as casual labourers. Hence, they lack access to statutory social protection (Holme, 2007). To close up the gaps arising from inadequate formal social protection provision, informal mechanisms are used. In slums, they exist in various forms, such as self-help groups, funeral schemes, savings groups and social welfare groups, enabling low-

income households to deal with unpredictable day-to-day livelihood events (Muiruri, 2013). Savings and Internal Lending Communities (SILC) is a community-based savings programme pioneered by the Catholic Relief Service (CRS) (Vanmeenen, 2010). Once a SILC group is formed, it names itself and chooses among its members who will be on the management committee. The group also agrees on the cycle duration. The total savings are shared according to each member's contributions. After the sharing, the group may stop contributing or continue, and at this point, new members may be invited (Parlar, Francois, T, & Foreit, 2015). Savings and Internal Lending Communities (SILCs) groups comprise people who put their money together to form a common group fund (Bavois, Mangeni & Soko, 2019). Savings and borrowing activities are done during the SILC cycle (Vanmeenen, 2010). The SILC group members are required to contribute a minimum amount at every meeting during the course of the SILC cycle, from which they can borrow and pay back with interest at a rate set by the group (Parker, Francois, Desinor, Cela, Forest & Karen, 2017). Transactions are made in the presence of the members during SILC meetings to ensure transparency. Members are also allowed to access loans and emergency grants in times of need (Bavois, Mangeni & Soko, 2019).

2. Literature Review

Savings and Internal Lending Communities (SILC) groups have shown positive effects on the SILC participants in a number of studies as attributed (Linn, 2017) (Mwansakilwa, Tembo, Zulu & Mukata, 2017) & (SEEP Network, 2018). The benefits of SILC participation included asset accumulation, expansion of business-generating activities through affordable loans and accessibility to social funds for emergency purposes among the SILC members (Taneja, 2013). Participation in savings groups has revealed that it contributes to poverty alleviation (SEEP Network, 2017). This is because savings groups facilitate financial inclusion by rendering basic financial services (SEEP Network, 2018). This was supported by studies conducted by Mwansakilwa, Tembo, Zulu and Mukata (2017) in Zambia on Village Savings and Loan Associations, which revealed that informal savings groups lead to poverty alleviation. The same study further revealed that households that participated in group savings were, on average, better off; they were able to manage basic needs and had a greater wealth index than non-participants. In addition, Linn (2017) established that poverty reduction in Lagos was experienced by the poor who engaged in financial activities that helped to improve their living conditions and cope with and overcome many of the problems they faced. Asombobillah (2011) in Ghana found out that SILC members were able to invest their loans in agricultural activities and that helped them to buy agricultural inputs such as improved seed and fertilizer, thereby improving their yields. In addition, loans were used for petty trade activities, school fees, and to pay the family's health insurance premium. A study conducted by Allen, Coonrod, Ashby and Njiru (2020) on SILC in Rwanda and Senegal showed that participation in SILC helped members overcome cash shortages for expenses such as nutritional food and health care. The study further revealed that SILC enabled farmers to buy different types of seed and fertilizer while permitting them to repay in monthly instalments. However, how SILC loans contributed to poverty reduction among SILC members in the Shangai informal settlement of Mpika District was the gap that was addressed by this study.

3. Materials and Methods

3.1. Research Design, Period and Location

This study adopted a descriptive survey design, employing both qualitative and quantitative data collection techniques, such as questionnaires and key informant interviews. The design was suitable for gathering information at one point in time and examining the effects of SILC participation on poverty reduction in the study area. The study was conducted from March to June 2022.

The study was conducted in the Shangai informal settlement of Mpika District. Mpika is a town in Muchinga province, lying at the junction of the Great North Road and Nakonde High Way. The study area lies between latitude 11° 53'S to 11° 49'S and longitudes 31° 23'E to 31° 27' E. (figure 1). It experiences a tropical climate. The area has three seasons: rainy season, cold season and hot season. Altitudes of Mpika range from 915m to 1520m; Mpika experiences annual temperature which ranges from 15° to 27° c. Shangai informal settlement is located eight (8) kilometres west of Mpika Town Central Business District. The population of Mpika is 203,379 (CSO, 2017). The majority of the population is involved in informal sector employment (CSO, 2018). Formal employment and income rates were low, resulting in limited access to sufficient income among households, which led to an inability to acquire basic needs (Chisala, Cede, Dagdevien & Saad, 2006). In Mpika District, economic activities were largely confined to the informal sector. The informal sector employs about 73 percent of the labour force in the Mpika district (CSO, 2018).

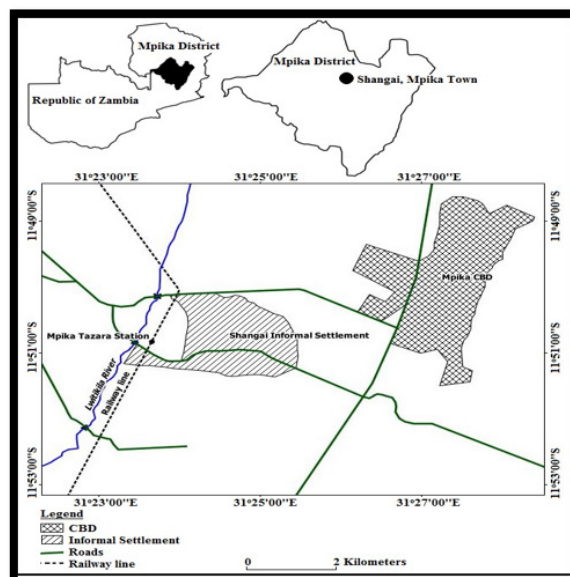


Figure 1: Map for Shangai Informal Settlement
Source: Ministry of National Development and Planning (2017)

3.2. Target Population

The target population refers to groups, individuals, or elements with common characteristics that can be identified and studied by the researcher (Creswell, 2012). In this study, the target population was all registered SILC groups in Shangai informal settlements that had existed for over two years.

3.3. Sampling Technique and Sample Size

3.3.1. Sampling Technique

The study used purposive sampling to select SILC members who had been in the programme for two or more years. Out of the 23 SILC groups registered by Mpika Diocese, 14 groups met the threshold of being in existence for more than two years. Snowball selection was used to get 8 respondents from each of the 14 groups.

S/N	SILC Group Name	Membership	Female	Male
1	Sisters fellowship 1	30	8	22
2	Bwafwano	26	21	5
3	Fikachitika	18	9	9
4	Tuibombele	26	22	4
5	Twafwane	26	26	0
6	Tubombele pamo	20	16	4
7	Sekelela 2	22	18	4
8	Tushangile	27	21	6
9	Sisters fellowship 2	30	18	12
10	Bafwaneko	20	18	2
11	Tubombeshe	30	29	1
12	Whakatane	30	26	6
13	Tingwilizane	20	13	7
14	Sekelela 1	17	17	0
15	Newmarket	29	24	5
16	Famu	17	15	2
17	Tweshoko	15	11	4
18	Tatwakafilwe	16	16	0
19	Mucitelelwe	17	17	0
20	Mutondo	11	9	2
21	Together	15	11	4
22	Panono panono	20	20	0
23	Tweende	11	11	0
	Total	493	395	98

Table 1: SILC Participation in Shangai Informal Settlement
Source: Caritas Mpika (2019)

Snowballing involves major data sources, such as other possible data sources that would be suitable for participation in the research study (Everit & Skrondal, 2010).

3.3.2. Size of Sample

The sample size was determined by using Nassiuma's (2000) formula. According to Nassiuma (2000), a good coefficient must be in the range of $20\% \leq C \leq 30\%$ and the standard error must be in the range of $2\% \leq e \leq 5\%$. However, the higher the value of the coefficient of variation and standard error to be used, the lower the variability in the sample and the minimal error.

Equation: $n = Nc^2 / (c^2 + (N-1)e^2)$

Where: N = Population; n = sample size; c = coefficient of variation; e = standard error

$n = ?$; N = 493; c = 24% = 0.24; e = 2% = 0.02

$n = \frac{493 (0.24^2)}{(0.24^2) + (493 - 1) (0.02^2)}$

$n = 111.6, 226415 = 112$

Therefore, 112 SILC participants were sampled from a total population of 493 Shangai SILC members.

3.3.3. Data Collection

The study used data from both primary and secondary sources. The primary source was the researcher's field data gathered directly from the study participants using the questionnaires and interview guide. The secondary sources were literature and reports on SILC that were used to establish the number of SILC groups and their locations in Shangai.

3.3.4. Primary Data

The questionnaires comprised both closed and open-ended questions, which were used to obtain quantitative data and qualitative data. The questionnaires captured socio-demographics, socio-economic empowerment, and household assets that were used to assess poverty reduction. An interview guide (Appendix) was used to collect qualitative data on reasons for joining SILC, and it was done by key informants, including leaders of the various SILC groups, workers of the Catholic Relief Services, and SILC field agents.

3.3.5. Secondary Data

The secondary data sources used were SILC registers, cash books, and reports from Catholic Relief Services/field agents. The data was used to determine the total number of SILC groups and their locations within Shangai. It was established that there were 23 SILC groups with a total membership of 493. The study sample size of 112 was drawn from 493.

3.4. Pilot Study

The pilot study was conducted in Kamwanya informal settlement which was one of the informal settlements in Mpika District. The pilot study had a sample size of 20 respondents who were picked at random and were not part of the final study sample size of 112. Nineteen (19) pilot study participants were interviewed, representing a 95% response rate. One respondent was not available at the time of the study despite the 3 callbacks that were made. According to Remenyi (2012), 95% of the response rate was effective for the study. The pilot study was done to pre-test the questionnaire and helped in amending the final questionnaire. During the pilot study, it was observed that instructions on the questions in the questionnaire were a type of self-administered questionnaire instead of a researcher-administered questionnaire. Hence, modifications were made to suit the questionnaires administered by the researcher.

3.5. Reliability and Validity

Reliability and validity are cardinal concepts in research used to improve the correctness of the tool and the consistency of research findings (Tavakol & Dennick, 2011). Reliability is the consistency and stability of a measure or score. It refers to the extent to which the same results are produced on several trials by a measurement method (Leung, 2015). The test re-test method was used to examine the reliability of the questionnaire. Ten (10) respondents were randomly selected out of the 20-pilot study size and interviewed. The same ten respondents were requested to be re-interviewed on another day, and the reliability coefficient was determined, which was 0.82 (confidence interval: 0.74-0.89). According to Remenyi (2012), the coefficient above 0.7 was considered adequate for the questionnaires to be used in the research.

Validity refers to whether an instrument measures what it was meant to measure (Leung, 2015). In this study, validity was determined by the supervisors, who are experts in the research topic. Questions were formulated based on the objective of the study, and supervisors verified them subjectively.

3.6. Data Processing and Analysis

Descriptive analysis in Statistical Package for Social Scientists (SPSS) version 20 was used to analyze demographic and socio-economic characteristics. An independent t-test was employed to determine the effects of SILC on poverty reduction through asset accumulation. The assets that were identified to be obtained due to participation in SILC were further subjected to Binary logistic regression analysis. The assets with a statistical significance at $p < 0.05$ after Binary logistic regression analysis were interpreted as effects of SILC participation on poverty reduction.

4. Results and Discussion

4.1. Characterization of Savings and Internal Lending Communities in Shanghai Informal Resettlement

4.1.1. Response Rate

The study had a sample size of 112 respondents, and the response rate was 100%. To achieve this response rate, contact numbers were obtained at the first visit to the households where the respondents were not available, and then arrangements were made to meet at the respondents' convenience within the study time frame.

4.1.2. Demographic Characteristics of Study Participants

This research collected data to identify the demographic characteristics of the SILC members. According to Henry (2019), demographic information was important in understanding the study participants in relation to the subject. Hence, this study gathered demographic data on gender, age, marital status, and household size to understand study participants in reference to the study findings.

4.1.2.1. Gender of Study Participants

The gender of the study participants was established. The female respondents were 51% compared to the men's respondents, who were 49%. The study showed that the majority of SILC members in the Shanghai informal settlement were females as compared to males. The findings agreed with the study done by Wechabe, Okumu and Mwangi (2022) in Kenya, whose findings were that women's participation in SILC groups was higher than men's. This was because of easy access to assets and improved income sources among women (Wechabe, Okumu & Mwangi, 2022). Another study by Pearce & Zulu (2020) in Zambia also revealed that savings groups proved to be instrumental in propagating financial inclusion, particularly among rural women who were most vulnerable to economic shocks.

4.1.2.2. Age Distribution of Study Participants

The majority of the study participants in the Shanghai informal settlement were in the age category of 41-50, and the mean age was 43.91 ± 8.91 , as shown in figure 2. Other study participants aged between 20-30 and 61 and above were 8.0% and 2.7%, respectively. The study findings also showed that SILC participants were all above 18 years. Age is an important demographic factor that is believed to be a key driver for any successful business or socio-economic empowerment project. According to Jones, Kim and Javier (2017), middle-aged individuals (25-40 years) were found to be more successful in running businesses.

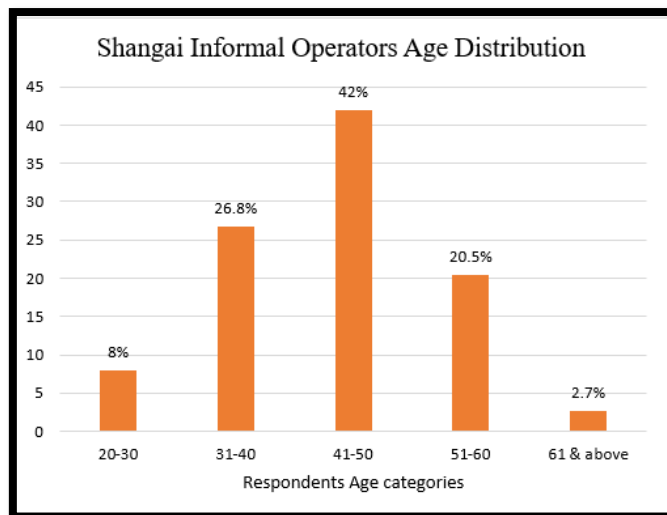


Figure 2: Age Distribution of the Study Participants
Source: Author, Field Data, 2022

However, this study revealed that socio-economic empowerment was not restricted to middle-aged individuals, as most of the study participants were in the 41-50 age category. Hence, the study findings established that socio-economic empowerment can be employed in any age category.

4.1.2.3. The Marital Status of Study Participants

The marital status of the study participants was one of the demographic data collected as it influenced the decision on the utilization of SILC funds at the household level. Figure 3 shows that a large share (56.3%) of study participants was married. Widows were second with a share of 16.1%, and the smallest share was for widowers with 6.3%. This study established that SILC participation was mostly among married informal operators, who comprised the majority (56.3%).

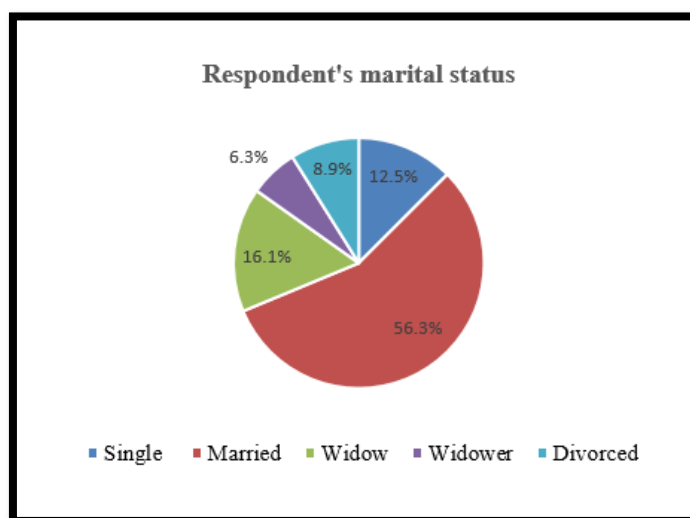


Figure 3: Marital Status of the Study Participants
Source: Author, Field Data, 2022

This study's findings agreed with Alimba (2015), who stated that marital status contributed a significant part to the success of a business as married people were more serious about socio-economic empowerment due to their responsibility. This study's findings established that SILC participation had the potential to empower both women and men in a household among the informal operators in the Shangai settlement.

4.1.2.4. Household Size

The household size of the study participants was established, as shown in figure 4. The highest household size frequency was a house with 6 members. Figure 4 also shows that households with 7 members were the second largest, followed by households with 8 members. On the other hand, households with 2, 3 and 10 members had the lowest frequencies.

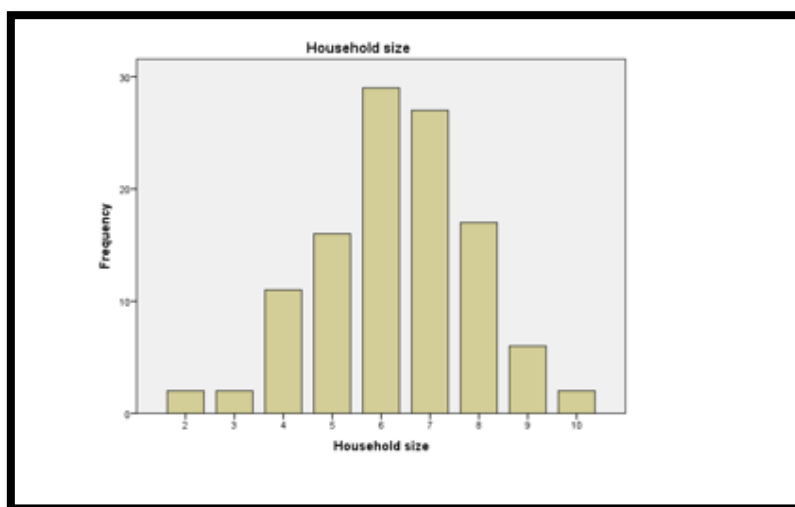


Figure 4: Distribution of Study Participant's Household Size
Source: Author, Field Data, 2022

The household size was further categorized into three sizes: 2-4, 5-7 and 8 members and above. According to this classification, households with 5 to 7 members were 60.7%, while households with 2-4 members were only 13.4%. Households with 8 members and above were slightly above a quarter (29.5%) in the Shangai informal settlement. The mean household size in this study was 6.31 ± 1.59 , which meant that many households had 6 or more household members. Therefore, the majority of the study participants had large household sizes above the national average size of 5 (ZDHS, 2018).

4.1.3. Socio-economic Characteristics of Study Participants

The research also considered the socio-economic factors of the study participants in the Shangai informal settlement, and data were collected on education, occupation and monthly income.

4.1.3.1 Education Status of Study Participants

The highest level of education attained by the majority of study participants in the Shangai informal settlement was basic education (32.1%) as shown in figure 5. Basic education in Zambia means someone having a junior secondary school certificate. Figure 5 also shows that the second group of study participants (25%) had completed senior secondary school. If the bar chart is divided into two divisions of education level, that is, primary education and basic-tertiary education, the majority (80.4%) of study participants fall into the basic-tertiary education while 19.6% were in the primary education division.

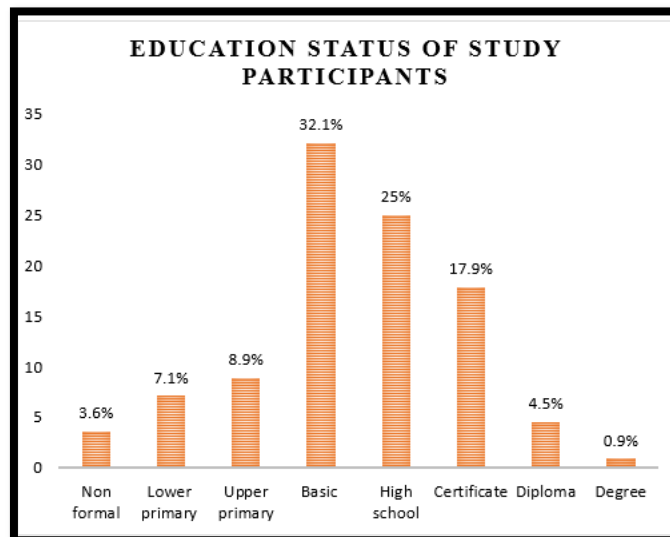


Figure 5: Education Status of Study Participants

Source: Author Field Data, 2022

Therefore, the majority of SILC members in the Shangai informal settlement had attained education beyond the primary education level. The importance of education attained by an individual in any socio-economic empowerment was found to be the main driver, as established by Wechabe, Okumu, and Mwangi (2022) in a study conducted in Meru County, Kenya. In the same study in Meru County, it was established that participation in SILC was largely influenced by the education level attained by the members. Therefore, this study has equally demonstrated that the education level attained by informal operators influenced their participation in SILC.

4.1.3.2. Occupation of Study Participants

Table 2 shows the occupation and household monthly income of the study participants. The majority (71.4%) of the respondents were engaged in various forms of business as their main occupation.

Characteristics (N=112)	Frequency	Percent	Cumulative
Occupation			
Tailoring	2	1.8	1.8
Business	80	71.4	73.2
Wage laborer	2	1.8	75.0
Welding	3	2.7	77.7
Bricklaying	2	1.8	79.5
Bicycle repairing	3	2.7	82.1
Phone repairing	2	1.8	83.9
Domestic house worker	2	1.8	85.7
Hairdresser	3	2.7	88.4
Chicken rearing	5	4.5	92.9
Shoe repairer	2	1.8	94.6
Internet café	4	3.6	98.2
Quarters for rentals	2	1.8	100.0

Table 2: Economic Characteristics of Study Participants

Source: Author, Field Data, 2022

Since the majority of informal operators were engaged in business, participation in SILC was mainly for capital expansion. This was in agreement with a study conducted by Mseteka (2017) in the Northern Province of Zambia, which showed that SILC members benefited from participation in SILC, scaling up their income reserves and involvement in income-generating activities through the use of SILC loans. In a study conducted in Ghana, SILC participation proved to be a sustainable way of improving communities' financial conditions (Atogiyire, Dery, Darko & Shaw, 2017).

4.1.4. Reasons for Joining SILC by Study Participants

The study established the reasons tabulated in table 3 as the main reasons study participants joined SILC. A larger proportion of 28.6% joined to save their money. Meanwhile, a proportion of 20.5% and 15.2% joined SILC to access loans and to save, respectively. The remaining fraction of the 100 percent joined SILC for various reasons, as shown in table 3. The first three reasons were the major reasons that were also cited from all the 8 Key Informants interviewed on the reasons people in the Shangai informal settlement participated in SILC.

Why Join SILC?			
Reasons	Frequency (N=112)	Percent	Cumulative Percent
To save money	32	28.6	28.6
To save and get loans	17	15.2	43.8
Access to loans	23	20.5	64.3
Access to loans and social funds for emergencies	8	7.1	71.4
To access social funds for emergencies	1	0.9	72.3
Increase business capital/lump sum	4	3.6	75.9
To keep money safe	2	1.8	77.7
To meet school requirements	6	5.4	83.0
Enable the community to be self-reliant financially	3	2.7	85.7
To improve living conditions	2	1.8	87.5
Increase household income and assets	2	1.8	89.3
Alternative way of banking	1	0.9	90.2
To save money so that it gains interest	11	9.8	100.0
	112	100	

Table 3: Reasons for Joining SILC in Shangai Informal Settlement
Source: Author, Field Data, 2022

Figure 6 shows SILC in session, with some members returning the loans they received in previous sessions. The treasurer receives the money, while the secretary reviews the list of SILC members whose loans need to be paid back to the group.



Figure 6: SILC Meeting in Progression at One of the Participating SILC Groups during Data Collection
Source: Author, Field Data, 2022

Every member was free to get the loan as long as he/she was able to pay back with interest and within the stipulated time. Studies by Lee, Maffioli, Veliz, Munro, Phiri, Sakala and Lori (2021) supported this study's findings on why people joined SILC to access loans. According to Lee, Maffioli, Veliz, Munro, Phiri, Sakala and Lori (2021), SILC groups are a self-managed and informal form of microfinance that reaches out to everyone in the community. Furthermore, studies done by Parker, Francois, Desinor, Cela, Foreit and Karen (2017) found that people joined SILC to be eligible for low-interest loans. Caritas, Mpika (2018) and Taneja (2013) added that SILC loans were collateral and, hence, attractive to people to join.

4.1.5. Accessibility, Frequency and Reasons for Acquiring SILC Social Funds

Table 4 shows the reasons for and frequency of SILC social funds access among the SILC members who participated in this study. During the study, it was established that 58.9% of the study participants had access to SILC social funds (Table 4). The SILC social funds were funds set aside for use in case of any emergency experienced by any

member of the group. The SILC social fund was readily available and easy to access whenever one had a problem, provided there was proof. Table 4 also indicates that admission at the hospital was the main reason (39.3%) for acquiring SILC social funds. A study conducted by Parker, Francois, Desinor, Cela, Foreit, and Karen (2017) found that people joined SILC in order to get social funds to deal with unpredictable events that affect households. SILC helped members to be financially included. Brett, Musoke and Green (2010) also added that the main reason people joined savings groups were to cater to emergencies.

SILC Social Funds	Frequency	Percent	Cumulative
Accessibility			
Accessed social fund	66	58.9	58.9
Never accessed fund	46	41.1	100
Frequency			
Once per cycle & Any/each/whenever time problem occurs with a proof	24	21.4	21.4
Once per month and any/each/whenever time a problem occurs with a proof	16	14.3	35.7
Many times, as problems strike and any/each/whenever time problem occurs with a proof	16	14.3	50
Many times, as problems strike	24	21.4	71.4
Any/each/whenever time a problem occurs with a proof	32	28.6	100
Reasons for Accessing Social Funds			
Sickness/illnesses & funeral/bereavement	8	7.1	7.1
Admitted at the hospital	44	39.3	46.4
Funeral/bereavement	13	11.6	58
When experience theft	1	0.9	58.9
Not accessed social funds	46	41.1	100

Table 4: Accessibility, Frequency and Reasons of Acquiring SILC Social Funds

Source: Author, Field Data, 2022

4.2. Effects of SILC on Poverty Reduction among Study Participants

The effects of SILC participation by study participants were assessed through the acquisition of assets. Table 5 shows the ownership of assets before and after joining SILC by study participants.

Asset	Asset Ownership by Respondents (N=112)			Mean and Standard Deviation			Statistical Difference in Asset Accumulation (Independent t-test)
	All Together n(%)	Before Joining SILC n(%)	After Joining SILC n(%)	Total Assets Owned (Mean±SD)	Before Joining SILC (Mean±SD)	After Joining SILC (Mean±SD)	
House	80(71.4)	66(58.9)	14(12.5)	0.82±0.6	0.70±0.6	0.13±0.3	p=0.456
Car	13(11.6)	12(10.7)	1(0.9)	0.12±0.3	0.12±0.3	0.0±0.0	p=0.997
Television	105(93.8)	81(72.3)	24(21.4)	0.95±0.3	0.73±0.5	0.12±0.4	p=0.066
Sofa set	100(89.3)	60(53.6)	40(35.7)	0.90±0.4	0.55±0.6	0.36±0.5	p=0.484
Radio	108(96.4)	29(25.4)	79(70.5)	1.0±0.3	0.29±0.5	0.71±0.5	p=0.221
Computer	18(16.1)	15(13.4)	3(2.7)	0.16±0.4	0.13±0.3	0.03±0.2	p=0.999
Fridge	101(90.2)	53(47.3)	48(42.9)	0.91±0.3	0.48±0.5	0.43±0.5	p=0.344
Electric stove	80(71.4)	50(44.6)	30(26.8)	0.73±0.5	0.45±0.5	0.29±0.5	p=0.911
Phone	110(98.2)	23(20.5)	87(77.7)	1.17±0.4	0.39±0.5	0.79±0.4	p=0.044*
Bed	112(100)	61(54.5)	51(45.5)	2.14±0.6	1.68±0.9	0.46±0.5	p=0.016*
Kitchen unity	65(58.0)	43(38.4)	22(19.6)	0.58±0.5	0.38±0.5	0.20±0.4	p=0.778
Wardrobe	74(66.1)	45(40.2)	29(25.9)	0.67±0.5	0.36±0.5	0.31±0.5	p=0.997
Breakable plates	90(80.4)	21(18.8)	69(61.6)	1.39±0.9	0.67±0.7	0.73±0.6	p=0.054*
Dressing mirror	83(74.1)	21(18.8)	62(55.4)	0.76±0.5	0.21±0.4	0.55±0.5	p=0.422
Dining table	106(94.6)	85(75.9)	21(18.8)	0.95±0.2	0.77±0.5	0.19±0.4	p=0.211
Bicycle	62(55.4)	13(11.6)	49(43.8)	0.59±0.6	0.14±0.4	0.44±0.5	p=0.369
Sponge mattresses	112(100)	62(55.4)	50(44.6)	2.14±0.6	1.68±0.7	0.45±0.5	p=0.014*
Satellite dish	82(73.2)	42(37.5)	40(35.7)	0.74±0.4	0.38±0.5	0.36±0.5	p=0.112

Table 5: Assets Ownership by Study Participants' Statistical Significance at $p < 0.05$

Source: Author, Field Data, 2022

The study examined the effect of SILC participation on poverty reduction through asset ownership. Table 5 shows all assets owned before and after joining SILC. The same table also shows that the acquisition of assets differed from one asset to another. However, only a few assets had a positive statistical significance association with SILC participation after being subjected to an independent t-test. The positive values of statistical probability (p) meant that an association existed between SILC participation and asset accumulation. The assets that were associated with SILC participation were phones, beds, sponge mattresses, and break plates because of the p-values, which were less than 0.05. These same assets that showed statistical significance in acquisition were further analyzed using binary logistic regression to identify the actual assets that were really acquired due to SILC participation. Table 6 shows the results of the final analysis.

Variables	SILC Participation		
	OR	95% CI	p
Assets			
Phone	0.829	0.491-1.398	0.481
Bed	1.882	1.174-3.017	0.009*
Breakable plates	1.461	0.916-2.330	0.111
Sponge mattresses	2.154	1.321-3.512	0.002*

Table 6: Summary of Binary Regression Statistics for the Predictors of Children's Nutritional Status Significant At $P < 0.05$

Source: Author, Field Data, 2022

Table 6 shows that out of the four assets subjected to Binary regression analysis, it was the acquisition of the beds and sponge mattresses which still had statistical significance. This meant that poverty reduction due to SILC participation among the study participants through asset accumulation did exist. Therefore, SILC participation had an effect on the ownership of beds and sponge mattresses among residents of the Shangai informal settlement. The positive association of asset accumulation and poverty reduction through SILC participation established in this study was equally established in several other studies (Linn, 2017; Mwansakilwa, Tembo, Zulu & Mukata, 2017; and SEEP Network, 2018). In addition to these studies, Lee, Maffioli, Veliz, Munro, Phiri, Sakala, & Lori (2021), in a study conducted in the two districts of Zambia, established that members who participated in SILC groups had increased their household wealth through the accumulation of assets. Similarly, another study in Malawi agreed with these study findings that SILC participation led to the accumulation of household assets Waller (2007). Therefore, the findings of this study suggest that SILC participation had a positive effect on poverty reduction.

5. Conclusion

The participation of Study participants in Savings and Internal Lending Communities (SILC) groups in Shangai informal settlement had a positive effect on poverty reduction through asset accumulation. The majority of the study participants acquired phones, sponge mattresses, and beds after they joined SILC. Therefore, this study recommends that informal operators of Shangai informal settlements take SILC as a serious microfinance intervention that could alleviate poverty among them. The study also recommends that financial institutions help SILC groups with revolving capital that would boost the groups' finances.

6. Abbreviations

ASCA: Accumulative Savings and Credit Associations

CI: Confidence Interval

CRS: Catholic Relief Services

CSO: Central Statistics Office (Zambia)

DFID: Department for International Development

FSD: Financial Sector Deepening

ILO: International Labour Organization

MCDMCH: Ministry of Community Development, Mother and Child Health

MNDP: Ministry of National Development and Planning

ROSCAS: Rotating Savings and Credit Associations

SPSS: Statistical Package for Social Sciences

SILC: Savings and Internal Lending Communities

SEEP: Small Enterprise Education and Promotion.

7. Acknowledgements

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8. Ethical Approval and Consent to Participate

Ethical clearance was obtained from ERES CONVERGE (Ref: No. 2021-Dec-016) in Zambia. A research permit was obtained from the Mpika District Commissioner's office (3rd March 2022). Voluntary, informed consent was sought from all the participants in the study. Participants in the study were assured of confidentiality in the information they gave.

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Appendix

Key Informant Interview Guide

I am doing masters at Kenyatta University. This Interview guide is to gather information on the contribution of SILC to household's welfare among residents of Mpika.

1. What are some of the reasons and expectations of joining SILC?
2. How do people join SILC?
3. What are the requirements of being a member of SILC?
4. What are the benefits of SILC?
5. How does the SILC social fund help participants?
6. How often is the SILC social fund for emergencies accessed?
7. How is participation in SILC help in increasing household income?
8. Does participation in SILC lead to economic empowerment?
9. Do SILC members face challenges in terms of loan repayment?
10. What are some of the reasons for defaulting the SILC loan fund?
11. Is the lump sum affected by defaulters?
12. Does participation in SILC help in meeting basic needs?
13. Can the death of a SILC member be owing the SILC group a lot of money has any effect the SILC loan fund?
14. Is the SILC fund used in opening business or expanding existing ones?
15. What measures are taken to address the issue of defaulting?
16. Can participation in SILC lead to asset accumulation?
17. Does participation in SILC lead to poverty alleviation?
18. Is participation in SILC lead to socio economic empowerment among participating households?
19. Does the SILC fund meet tertiary education requirements (supporting children at universities and colleges) effectively?