

The Effects of Savings and Internal Lending Communities (SILC) Social Fund on the Well-Being of Vulnerable Children in Kenya

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ABSTRACT

Vulnerable children in Kenya experience overlapping deprivations in food and nutrition, healthcare, education, shelter and care. Savings and Internal Lending Communities (SILC) provide community-based mechanisms through which caregivers can mobilise resources and obtain emergency assistance through social funds. This study examined the relationship between the SILC social fund and the well-being of vulnerable children in Kenya, focusing on the adequacy, dependability and availability of the fund. A cross-sectional mixed-methods design was used. The sampling frame comprised 25,408 SILC participants in five selected counties. A stratified two-stage cluster sampling procedure was applied, with SILC groups selected using Probability Proportional to Size sampling and individual participants selected through simple random sampling. Quantitative data were obtained from 393 completed questionnaires, while qualitative evidence was collected through Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs). Descriptive statistics, Principal Component Analysis (PCA) and multiple regression were used for quantitative analysis, while qualitative data were analysed thematically. The questionnaire contained 13 descriptive social-fund indicators; the available PCA output contained 12 indicators and yielded three components interpreted as adequacy, dependability and availability. The three components jointly explained 81.612% of the variance. Regression results showed that social-fund availability had a positive and statistically significant association with access to education ($B = 0.097$, $p = .042$), food ($B = 0.429$, $p < .001$), shelter and care ($B = 0.101$, $p = .046$), and healthcare ($B = 0.267$, $p < .001$). Adequacy and dependability showed outcome-specific associations. The models explained 13.1% of the variance in education, 18.6% in food, 2.2% in shelter and care, and 8.3% in healthcare. Qualitative findings indicated that caregivers used social funds to respond to emergencies involving food, healthcare, education and shelter, although limited resources and access constraints reduced their reach. The findings suggest that the SILC social fund is an important complementary safety-net mechanism, particularly when resources are available when needed, but it should not be interpreted as a stand-alone solution or as establishing causal effects in a cross-sectional design.

Keywords: Savings and Internal Lending Communities, SILC, social fund, vulnerable children, child well-being

INTRODUCTION

Background to the Study

Child well-being is multidimensional and encompasses children's access to adequate nutrition, healthcare, education, safe shelter, protection and supportive social environments. Children living in poverty, experiencing parental loss, inadequate caregiving, disability, violence, displacement or social exclusion are particularly vulnerable to deprivation across these dimensions. Recent evidence from Kenya demonstrates that child

vulnerability is driven by interconnected economic and social disadvantages, with deprivation occurring simultaneously across health, nutrition, education, housing and protection (Kenya National Bureau of Statistics [KNBS], UNICEF Kenya, & UN Women, 2025). Rural and underserved communities experience disproportionately high levels of these overlapping vulnerabilities.

The extent and nature of child vulnerability vary across households and communities and are shaped by economic resources, caregiving arrangements, access to essential services and the strength of social protection systems. UNICEF Kenya (2025) reports persistent child poverty, particularly in rural and arid and semi-arid areas where access to quality education, healthcare, nutrition, water, sanitation and other basic services remains constrained. The 2025 Brighter Futures report further shows that more than half of Kenyan children are multidimensionally poor, illustrating why child well-being cannot be adequately understood through income alone (KNBS et al., 2025).

These vulnerabilities have important implications for children's development and life chances. Poverty and inadequate access to essential services can compromise health, nutrition, educational participation and protection, while economic and environmental shocks can further weaken household capacity to provide care. Kenya has consequently invested in social assistance, health, education, nutrition, water and sanitation, and child-protection programmes. Nevertheless, coverage and adequacy remain challenges, creating a continuing need for complementary community-based mechanisms that can strengthen caregivers' capacity to respond to children's needs.

Savings and Internal Lending Communities (SILC) provide one such community-based mechanism. SILC enables members to mobilise savings, access internal loans, establish social funds and participate in collective activities that can strengthen household and community resilience. For caregivers of vulnerable children, the social fund can provide assistance during emergencies involving healthcare, food shortages, education-related expenditure and other household shocks. Welfare funds within savings groups have also been characterised as informal insurance mechanisms that facilitate risk-sharing among low-income households (Gonzales Martinez, D'Espallier, & Mersland, 2024).

Evidence from savings-group interventions suggests that community-based financial mechanisms can strengthen household resilience by improving access to savings and emergency resources. Lee et al. (2022), for example, found associations between SILC participation, financial preparedness and utilisation of essential health services in rural Zambia. Panman et al. (2022) similarly found that households participating in savings groups in Dar es Salaam recovered more quickly from flooding than households without such participation. Evidence from Ethiopia also indicates that caregivers' savings-group participation can be associated with pathways through which children's material and non-material needs are addressed (Rutherford et al., 2020).

However, financial access alone does not guarantee improved child well-being. The capacity of a social fund to respond to needs depends on the resources available, the rules governing access, the regularity of contributions and members' ability to participate. Parker et al. (2017) noted that savings-group participation can be constrained among economically vulnerable members, while social funds may also be depleted when many members require assistance simultaneously. The distinction between the existence of a fund and its adequacy, dependability and availability is therefore important.

Although existing studies have documented the contribution of SILC and related savings groups to financial inclusion, household resilience, livelihood improvement and economic empowerment, comparatively limited empirical attention has been given to the specific relationship between the SILC social fund and the multidimensional well-being of vulnerable children. Limited evidence exists on whether the adequacy, dependability and availability of the social fund are associated with caregivers' ability to meet children's needs for food and nutrition, healthcare, basic education, and shelter and care. This study addresses that gap.

Statement of the Problem

Despite progress in social protection and child-focused interventions, vulnerable children in Kenya continue to experience multiple and overlapping deprivations in nutrition, healthcare, education, housing and protection.

The KNBS, UNICEF and UN Women (2025) report that 55% of children in Kenya experience multidimensional poverty, with rural children substantially more likely than urban children to experience multidimensional deprivation. These conditions place continuing pressure on caregivers, particularly when households face sudden health costs, food shortages, school-related expenses or other shocks.

Kenya's formal social protection programmes provide important support, but gaps in coverage and adequacy remain. Community-based mechanisms such as SILC social funds can potentially complement formal systems by providing locally organised emergency assistance. Nevertheless, the existence of a social fund does not establish whether resources are sufficiently adequate, dependable or available when caregivers need them.

The empirical literature on SILC and related savings groups has largely focused on financial inclusion, household income, savings accumulation, livelihood improvement and resilience. Comparatively limited evidence has examined the specific contribution of the SILC social fund to the multidimensional well-being of vulnerable children. This evidence gap is important because the pathways linking community-based financial assistance to child well-being are likely to vary by the type of need and the resources available.

Accordingly, this study examined the relationship between the SILC social fund and the well-being of vulnerable children in Kenya, focusing on social-fund adequacy, dependability and availability and four well-being outcomes: food and nutrition, access to healthcare, access to basic education, and shelter and care.

Purpose of the Study

The purpose of the study was to examine the relationship between the Savings and Internal Lending Communities (SILC) social fund and the well-being of vulnerable children in Kenya.

Research Hypothesis

H₀₁: There is no statistically significant relationship between the SILC social fund and the well-being of vulnerable children in Kenya.

LITERATURE REVIEW

SILC Social Funds and Child Well-Being

SILC incorporates a social fund through which members make regular contributions to provide financial assistance during emergencies and other socially significant events. Unlike the loan fund, the social fund is primarily intended to provide immediate welfare support rather than generate financial returns. Contributions are managed according to group rules that specify eligibility, contribution requirements and conditions for accessing assistance. The social fund therefore functions as a form of informal risk-sharing within the group (Gonzales Martinez et al., 2024).

The potential of social funds to strengthen household resilience is supported by empirical evidence from savings-group interventions. Lee et al. (2022) reported that SILC participation in rural Zambia was associated with improved household financial preparedness and utilisation of essential health services. Panman et al. (2022) found that savings-group participation was associated with faster household recovery following flooding in Dar es Salaam. Such findings suggest that group-based financial mechanisms can help households manage shocks that might otherwise disrupt expenditure on essential needs.

The social fund is particularly relevant to vulnerable households because it can provide an alternative source of support when immediate expenditure is required. By enabling members to access assistance within their groups, the mechanism may reduce reliance on costly borrowing or the sale of productive assets. Rutherford et al. (2020) found that caregivers' savings-group participation was linked, through several pathways, to children's material and non-material needs, including education and health. However, these pathways are not necessarily uniform and should not be interpreted as evidence of a direct causal effect of social funds.

The benefits of social funds may also vary according to the size of the fund, the level and frequency of contributions, membership, rules of access and competing demands. Economically vulnerable members may experience difficulty sustaining contributions, while periods of widespread shocks can place considerable pressure on available resources. Parker et al. (2017) found that social funds were valued for emergency support in Haiti but that participation could be constrained among economically vulnerable members.

The literature therefore supports the view that social funds can function as important community-based safety nets while also highlighting the need to distinguish between availability of a mechanism and its capacity to meet actual needs. The present study extends this literature by examining three dimensions—adequacy, dependability and availability—in relation to specific child well-being outcomes in Kenya.

Theoretical Framework

The study was guided by Ubuntu Theory, Capability Theory and Basic Needs Theory. The three perspectives provide complementary explanations of how community-based resources may relate to child well-being.

Ubuntu Theory provides the social and communal perspective. Ubuntu emphasises mutual support, solidarity, interconnectedness and collective responsibility, principles that are consistent with the cooperative structure of SILC and its social fund (Schreiber & Tomm-Bonde, 2015). From this perspective, a social fund represents more than an individual financial resource; it reflects collective arrangements through which members support one another during periods of need.

Capability Theory provides a second perspective by focusing on the substantive opportunities available to people to achieve valued ways of living. Sen (1999) argues that resources matter because of what people are able to do and be with them. Applied to this study, access to a social fund may expand caregivers' practical ability to respond to shocks and convert available resources into food, healthcare, education and shelter for children. The capability perspective also helps explain why the presence of financial resources does not automatically translate into equivalent well-being outcomes.

Basic Needs Theory complements the first two perspectives by focusing attention on essential conditions required for human well-being, including food, health, education, shelter and related basic services (Streeten et al., 1981). It therefore provides a direct conceptual basis for assessing the four child well-being outcomes examined in this study. Together, the three theories provide a social, capability-based and needs-oriented framework for interpreting the relationship between the SILC social fund and vulnerable children's well-being.

Conceptual Framework

The conceptual framework operationalised the SILC social fund through three dimensions—adequacy, dependability and availability—and examined their statistical relationships with four dimensions of vulnerable children's well-being. The framework is presented in Table 1. The table replaces the earlier graphic representation to improve readability and ensure that all conceptual elements remain visible within the manuscript.

Table 1: Conceptual Framework of the Study

Variable	Dimension	Operational focus / outcome
Independent variable: SILC social fund	Adequacy	Sufficiency of the fund to meet identified child-related needs
	Dependability	Regularity and reliability of access to the fund when needed
	Availability	Whether resources can be accessed when required
Dependent variable: Child well-being	Food and nutrition	Access to food and nutrition
	Healthcare	Access to healthcare services
	Basic education	Access to basic education
	Shelter and care	Access to shelter and care

The framework assumes an associative rather than causal relationship because the study used a cross-sectional design. The three social-fund dimensions were therefore examined as explanatory variables in relation to the four well-being outcomes.

METHODOLOGY

Research Design and Study Population

The study adopted a cross-sectional research design using a mixed-methods approach. The target population comprised adult caregivers of vulnerable children participating in SILC programmes in five selected counties of Kenya. The sampling frame consisted of 25,408 SILC participants. A stratified two-stage cluster sampling procedure was employed, with counties forming the strata. At the first stage, SILC groups were selected using Probability Proportional to Size (PPS) sampling, after which individual SILC participants were selected through simple random sampling.

Sample and Data Collection

A total of 410 questionnaires were administered to sampled caregivers, of which 393 were completed and returned, giving a response rate of 93.3%. The quantitative sample of 393 respondents was used for the descriptive, PCA and regression analyses. Qualitative data were collected through Focus Group Discussions (FGDs) with SILC groups and Key Informant Interviews (KIIs) with SILC agents and leaders. The qualitative component provided contextual evidence for interpreting the quantitative findings.

Measurement and Analytical Procedures

The structured questionnaire contained statements measuring the SILC social fund and child well-being using five-point Likert-type response categories ranging from strongly disagree to strongly agree. The social-fund section contained 13 descriptive indicators. The raw questionnaire/frequency file confirms all 13 indicators, including the item concerning the regular provision of the social fund for healthcare. However, the available PCA output contains 12 indicators and does not include that healthcare-regularity item. Accordingly, all 13 indicators were retained for descriptive reporting, whereas the PCA and the subsequent three-dimensional social-fund solution were based on the 12 indicators present in the available PCA output. This distinction is made explicit to ensure analytical transparency.

Quantitative data were analysed using descriptive statistics, Principal Component Analysis (PCA) and multiple regression. PCA was used to examine the underlying structure of the 12 indicators available in the PCA output. Principal components were retained using the eigenvalue-greater-than-one criterion, supported by the cumulative variance explained, extraction communalities and the rotated component structure. Varimax rotation with Kaiser normalisation was used, and a loading of $|0.40|$ or greater was treated as a salient loading for interpretation. Because the available PCA output did not contain the KMO measure or Bartlett's test of sphericity, these diagnostic statistics could not be independently reported or reconstructed from the available aggregated frequency file. The limitation is reported explicitly rather than introducing statistics that cannot be verified.

The available PCA output produced three components with eigenvalues greater than one. The components were interpreted as adequacy, dependability and availability based on their dominant loading patterns. Because several indicators exhibited meaningful cross-loadings, the dimensions were treated as conceptually related rather than perfectly distinct. Multiple regression was then used to examine the associations between the three social-fund dimensions and four child well-being outcomes: access to education, access to food, shelter and care, and access to healthcare. Qualitative data from FGDs and KIIs were analysed thematically and integrated with the quantitative findings to provide contextual interpretation.

Research Authorisation and Ethical Considerations

The study was conducted under a research licence/permit granted by the National Commission for Science, Technology and Innovation (NACOSTI), authorising the research to be undertaken in Kenya. The available

source manuscript documents the NACOSTI research authorisation. No additional ethics-committee approval details were present in the source materials available for this revision; consequently, no unverified approval number or institutional ethics statement has been added.

RESULTS AND DISCUSSION

Response Rate

Of the 410 questionnaires administered, 393 were completed and returned, representing a response rate of 93.3%. The response rate provided a substantial quantitative basis for the planned analyses.

Descriptive Assessment of the SILC Social Fund

Respondents assessed the SILC social fund in relation to food and nutrition, healthcare, basic education, and shelter and care using a five-point Likert scale. Table 2 presents the descriptive results for all 13 social-fund indicators. Item wording is shortened in the table for readability while preserving the meaning of the original questionnaire statements.

Table 2: Respondents' Perceptions of the SILC Social Fund

Social-fund indicator (shortened)	N	Mean	SD
Enough for food and nutrition	393	3.89	1.319
Regular access for food and nutrition	393	3.90	1.306
Always available for food and nutrition	393	3.87	1.336
Adequate for healthcare access	393	3.87	1.342
Provided regularly for healthcare	393	3.79	1.405
Available to support healthcare	393	3.90	1.306
Adequate for basic education	393	3.90	1.296
Frequent access for basic education	393	3.61	1.489
Available for school fees/levies	393	3.71	1.453
Adequate for shelter and care	393	3.89	1.313
Access at any time for shelter and care	393	3.96	1.186
Available for shelter and care	393	3.96	1.186
Regular for shelter and care	393	3.97	1.179

All 13 descriptive indicators recorded mean scores within the 3.40–4.19 agreement range, with means from 3.61 to 3.97. The highest mean was for the regularity of the social fund in supporting shelter and care ($M = 3.97$, $SD = 1.179$), while the lowest was for frequent access to the fund for basic education ($M = 3.61$, $SD = 1.489$). Respondents therefore generally perceived the social fund as useful for addressing essential needs.

The findings are consistent with evidence that welfare funds within savings groups can operate as informal insurance mechanisms for low-income households facing adverse life events (Gonzales Martinez et al., 2024). They are also consistent with evidence from Zambia showing associations between SILC participation, financial preparedness and utilisation of essential health services (Lee et al., 2022). The relatively lower mean for frequent access to the fund for basic education suggests that education-related expenditure may be more difficult to address consistently than some immediate needs. The standard deviations also show variation in caregivers' experiences, which may reflect differences in group resources, contribution levels and competing demands for assistance.

Importantly, these descriptive results indicate perceived availability and usefulness but do not establish a causal effect. The inferential analyses below therefore examine statistical associations between the derived social-fund dimensions and child well-being outcomes.

Description of Child Well-Being Outcomes

Table 3: Descriptive Statistics and Reliability of Child Well-Being Measures

Well-being dimension	Mean	SD	Cronbach's α
Access to education	2.4351	1.42737	.889
Access to food	3.9262	1.22063	.802
Shelter and care	3.8796	1.26657	.753
Access to healthcare	3.9606	1.17231	.721

Respondents generally agreed that the social fund supported access to food, shelter and healthcare, with mean scores of 3.93, 3.88 and 3.96, respectively. In contrast, assured access to education recorded a mean of 2.44, which falls within the disagreement range. The relatively weaker education outcome may reflect the recurrent and diverse costs of schooling, including fees, learning materials, uniforms, transport and other indirect expenses, which may exceed the resources available through a social fund. It may also indicate that caregivers facing immediate food, health and shelter needs prioritise these expenditures when resources are constrained.

The education result should not be interpreted to mean that the social fund has no role in education. Rather, among the four outcomes assessed, education was the least strongly supported. This finding provides an important context for the regression results and for the qualitative evidence on education-related assistance.

Principal Component Analysis of the SILC Social Fund

The PCA was conducted on the 12 social-fund indicators represented in the available PCA output. The 13th questionnaire indicator—regular provision of the social fund for healthcare—was included in the descriptive analysis but was not represented in the available PCA output. The distinction does not alter the descriptive findings but means that the three component scores should be understood as being derived from the 12 indicators for which PCA results were available.

Table 4: Communalities of the 12 SILC Social-Fund Indicators

SILC social-fund indicator (shortened)	Initial	Extraction
Enough for food and nutrition	1.000	.909
Regular access for food and nutrition	1.000	.860
Always available for food and nutrition	1.000	.871
Adequate for healthcare access	1.000	.779
Available to support healthcare	1.000	.843
Adequate for basic education	1.000	.763
Frequent access for basic education	1.000	.798
Available for school fees/levies	1.000	.765
Adequate for shelter and care	1.000	.754
Access at any time for shelter and care	1.000	.864
Available for shelter and care	1.000	.868
Regular for shelter and care	1.000	.720

Extraction communalities ranged from 0.720 to 0.909, indicating that the retained components accounted for a substantial proportion of the variance in each of the 12 indicators. The lowest communality was 0.720 and the highest was 0.909.

Table 5: Total Variance Explained by the Principal Components

Comp.	Eigenvalue	% Var.	Cum. %	Extracted	% Var.	Cum. %	Rotated	% Var.	Cum. %
1	6.148	51.236	51.236	6.148	51.236	51.236	5.644	47.030	47.030
2	2.481	20.673	71.909	2.481	20.673	71.909	2.464	20.533	67.563
3	1.164	9.702	81.612	1.164	9.702	81.612	1.686	14.049	81.612
4	.464	3.867	85.479						
5	.447	3.723	89.202						
6	.371	3.093	92.296						
7	.302	2.514	94.810						
8	.220	1.834	96.644						
9	.143	1.191	97.835						
10	.110	.919	98.754						
11	.102	.853	99.607						
12	.047	.393	100.000						

Three components had eigenvalues greater than one: 6.148, 2.481 and 1.164. Together, they explained 81.612% of the total variance. After Varimax rotation, the three components accounted for 47.030%, 20.533% and 14.049% of the variance, respectively. The three-component solution was therefore retained on the basis of the eigenvalue-greater-than-one criterion, the high cumulative variance explained, the communalities and the interpretable rotated structure.

The available PCA output did not include KMO or Bartlett's test of sphericity. Because the respondent-level dataset and the original PCA diagnostic output were not available for this revision, these statistics cannot be reconstructed reliably from the aggregated frequency tables. This is reported as a data-availability limitation rather than replacing the missing statistics with estimates. The evidence available from the PCA output nevertheless provides several indicators supporting interpretation of the retained component structure.

Table 6: Rotated Component Matrix for the 12 PCA Indicators

SILC social-fund statement (shortened)	Adequate	Dependable	Available
Enough for food and nutrition	0.947	0.025	0.106
Regular access for food and nutrition	0.92	-0.021	0.118
Always available for food and nutrition	0.928	0.063	0.081
Adequate for healthcare access	0.865	-0.039	0.169
Available to support healthcare	0.888	0.008	0.231
Adequate for basic education	0.824	0.021	0.288
Frequent access for basic education	0.188	-0.07	0.87
Available for school fees/levies	0.317	-0.009	0.815
Adequate for shelter and care	0.825	0.12	0.243
Access at any time for shelter and care	0.002	0.929	-0.039
Available for shelter and care	0.082	0.925	-0.077
Regular for shelter and care	0.627	0.848	0.029

Note. Varimax rotation with Kaiser normalisation; rotation converged in four iterations. Loadings with absolute values of 0.40 or greater are treated as salient and shown in bold. Values below 0.40 are retained to make cross-loading patterns transparent.

The rotated component matrix shows that the first component attracted the strongest loadings for most indicators associated with perceived adequacy. The second component was characterised primarily by access and regularity indicators relating to shelter and care, while the third was characterised by frequency and availability indicators for basic education. The pattern supports the use of the three labels—adequacy, dependability and availability—but also demonstrates that these dimensions are not perfectly independent.

The most notable cross-loading occurs for the shelter-and-care regularity item, which loads .627 on adequacy and .848 on dependability. Several other items also have secondary loadings below .40, while the item concerning general availability of the fund loads strongly on the adequacy component (.928). This overlap is conceptually understandable because adequacy, dependability and availability describe closely related aspects of whether a social fund can meet needs when they arise. The components should therefore be interpreted as empirically distinguishable dimensions within a related construct rather than as completely separate phenomena.

Table 7: Descriptive Statistics and Reliability of the Three Social-Fund Dimensions

SILC fund dimension	Mean	SD	Cronbach's α
Social fund adequacy	3.8866	1.28629	.962
Social fund dependability	3.9652	1.16558	.886
Social fund availability	3.6590	1.41745	.724

Respondents generally agreed that the SILC social fund was adequate, dependable and available, with all three mean scores within the agreement range. Dependability recorded the highest mean ($M = 3.9652$, $SD = 1.16558$), followed by adequacy ($M = 3.8866$, $SD = 1.28629$) and availability ($M = 3.6590$, $SD = 1.41745$). The reliability coefficients were .962, .886 and .724, respectively, indicating acceptable internal consistency for the three derived dimensions.

The findings suggest that caregivers generally viewed the social fund as an important complementary safety-net mechanism. Nevertheless, the descriptive strength of the dimensions should not be interpreted as evidence of causal influence. The regression analysis provides the appropriate inferential evidence for examining the statistical relationships with the four outcomes.

Multiple Regression Analysis

Four multiple regression models were estimated, with access to education, access to food, shelter and care, and access to healthcare as the dependent variables and social-fund adequacy, availability and dependability as explanatory variables. All four models were statistically significant: education, $F = 20.637$, $p < .001$; food, $F = 30.917$, $p < .001$; shelter and care, $F = 3.879$, $p = .009$; and healthcare, $F = 12.812$, $p < .001$.

The adjusted R^2 values were .131, .186, .022 and .083, respectively. Thus, the three social-fund dimensions jointly accounted for 13.1% of the variation in access to education, 18.6% in access to food, 2.2% in shelter and care, and 8.3% in healthcare. The low explanatory power of the shelter-and-care model is particularly important: although the model was statistically significant, most of the variation in shelter and care was not explained by the three social-fund dimensions. Other household, socioeconomic, environmental, housing and service-access factors are therefore likely to contribute substantially to this outcome.

Table 8: Multiple Regression Results for SILC Social Fund and Child Well-Being

Predictor / statistic	Access to education	Access to food	Shelter and care	Access to healthcare
Constant	.298 (2.249, .025)	.393 (5.930, <.001)	.812 (9.257, <.001)	.680 (12.393, <.001)
Social fund adequate	-.282 (-5.309, <.001)	.009 (.175, .861)	-.163 (-2.885, .004)	.082 (1.505, .133)
Social fund available	.097 (2.043, .042)	.429 (9.348, <.001)	.101 (1.999, .046)	.267 (5.491, <.001)

Social fund dependable	.399 (7.500, <.001)	-.069 (-1.340, .181)	.109 (1.924, .055)	-.118 (-2.165, .031)
Adjusted R ²	0.131	0.186	0.022	0.083
SE of estimate	0.39847	0.19902	0.26368	0.16501
Model F (p)	20.637 (<.001)	30.917 (<.001)	3.879 (.009)	12.812 (<.001)

Note. B = unstandardized regression coefficient; t = t statistic; p = significance level; SE = standard error.

Education

Social-fund availability had a positive and statistically significant association with access to education ($B = 0.097$, $p = .042$). Dependability also showed a positive and statistically significant association ($B = 0.399$, $p < .001$). Adequacy showed a statistically significant negative coefficient ($B = -0.282$, $p < .001$). This negative coefficient should not be interpreted as evidence that greater adequacy reduces educational well-being. Because the social-fund dimensions are conceptually overlapping, the coefficient represents the association of adequacy while holding availability and dependability constant; it may therefore reflect shared variance or differences in the types of needs for which adequacy is perceived. The qualitative evidence provides important context. One participant reported that “Social Fund helps members to buy stationery for their children when they are sent out of school.” This indicates that the fund can help meet specific education-related costs even though the overall descriptive education outcome was comparatively weak.

Food and Nutrition

Availability showed a strong positive association with access to food ($B = 0.429$, $p < .001$), while adequacy ($B = 0.009$, $p = .861$) and dependability ($B = -0.069$, $p = .181$) were not statistically significant. The result highlights the importance of having resources accessible when an immediate food need arises. Qualitative evidence supports this interpretation. One caregiver explained, “Due to poor climatic conditions, drought and/or floods, we usually experience crop loss but having social fund, it has at least bridged the gap.” The quotation illustrates how the fund may operate as a short-term buffer during shocks, while the regression result should still be interpreted as an association rather than a causal effect.

Shelter and Care

The shelter-and-care model was statistically significant, but its adjusted R^2 was only .022, indicating that the three social-fund dimensions explained 2.2% of the variation in this outcome. Availability was positively associated with shelter and care ($B = 0.101$, $p = .046$), while adequacy had a negative coefficient ($B = -0.163$, $p = .004$) and dependability was not statistically significant ($B = 0.109$, $p = .055$). The low adjusted R^2 means that the significant availability coefficient should not be overstated. Shelter and care are likely influenced by factors extending well beyond access to a community social fund, including household assets, housing conditions, income, environmental shocks and access to services. The statistical result therefore provides evidence of a modest association rather than a comprehensive explanation of shelter and care.

Healthcare

Availability was positively and significantly associated with access to healthcare ($B = 0.267$, $p < .001$). Dependability showed a statistically significant negative coefficient ($B = -0.118$, $p = .031$), while adequacy was not statistically significant ($B = 0.082$, $p = .133$). The negative dependability coefficient should be interpreted cautiously because the three dimensions are correlated conceptually and statistically. The qualitative evidence reinforces the importance of immediate access to resources: one caregiver stated, “At times someone can be given social fund to take a child to hospital in case of emergency, if the money is available.” This evidence helps explain why availability may be particularly relevant for urgent healthcare needs.

Taken together, the regression results identify availability as the most consistent dimension, with a positive statistically significant association across all four outcomes. Adequacy and dependability show outcome-

specific coefficients, including some negative coefficients that should not be interpreted causally or substantively without considering the overlap among the dimensions. The mixed-methods evidence therefore suggests that the social fund is particularly relevant as an emergency resource, while its capacity to address longer-term or recurrent needs is more limited.

Integration of Quantitative and Qualitative Findings

The mixed-methods findings converge most clearly around the role of the social fund as an emergency-response mechanism. For food and nutrition, the quantitative model shows a strong positive association between availability and the outcome, while caregivers described using the fund to bridge gaps created by drought, floods and crop loss. For healthcare, availability was again positively associated with the outcome, and participants described using the fund to take children to hospital during emergencies. For education, availability and dependability were positively associated with the outcome, while qualitative evidence indicated that the fund could meet specific costs such as stationery and school-related expenses. For shelter and care, availability was positively associated with the outcome, but the model's low adjusted R^2 indicates that social-fund dimensions provide only a small part of the explanation.

This integration also clarifies why the three social-fund dimensions should not be treated as interchangeable. Availability concerns whether resources can be accessed when required; dependability concerns regularity and reliability; and adequacy concerns sufficiency relative to the need. A fund may therefore be available at a particular moment but still insufficient to meet the full cost of a need, as illustrated by the caregiver who reported that the amount received was not enough to cover total school fees but enabled the child to continue the term while other resources were sought. The qualitative evidence thus helps explain the differentiated quantitative relationships.

Hypothesis Testing

The hypothesis was assessed using the four multiple regression models. All four models were statistically significant, indicating that the set of SILC social-fund dimensions was significantly associated with each assessed well-being outcome. On this basis, the overall null hypothesis was rejected. This decision does not mean that every individual social-fund dimension was statistically significant for every outcome; rather, the individual coefficients demonstrate differentiated patterns of association.

Table 9: Summary of Hypothesis Testing

Null hypothesis	Decision
H ₀₁ : There is no statistically significant relationship between the SILC social fund and the well-being of vulnerable children in Kenya.	Rejected

SUMMARY OF THE FINDINGS

The study examined the relationship between the SILC social fund and the well-being of vulnerable children in Kenya. The analysis identified three related dimensions of the social fund—adequacy, dependability and availability—based on the 12 indicators represented in the available PCA output. The questionnaire contained 13 social-fund indicators, but one healthcare-regularity item was not included in the available PCA output; all 13 were retained in descriptive analysis and the distinction has been made explicit.

Respondents generally perceived the social fund as useful in supporting food and nutrition, healthcare, education, and shelter and care, although access to education received the weakest descriptive assessment. The regression analysis showed that availability had a positive and statistically significant association with all four well-being outcomes. Adequacy and dependability demonstrated outcome-specific associations. The models explained varying proportions of outcome variance, with the shelter-and-care model explaining only 2.2%, underscoring the importance of factors beyond the SILC social fund.

The qualitative findings provided contextual support for the quantitative patterns. Caregivers described using social funds to respond to food shortages, healthcare emergencies, education expenses and other household shocks. At the same time, participants reported limitations associated with insufficient resources and difficulty accessing the fund. These findings suggest that the social fund is most appropriately understood as a complementary community-based safety-net mechanism.

CONCLUSION

The study concludes that the SILC social fund is significantly associated with the well-being outcomes examined, particularly through the availability of resources when caregivers need them. However, the cross-sectional design does not permit causal conclusions, and the modest explanatory power of several models indicates that social-fund characteristics are only part of the wider set of factors shaping child well-being. The evidence therefore supports the role of SILC social funds as complementary mechanisms rather than stand-alone solutions to household vulnerability.

The overlap among adequacy, dependability and availability also suggests that interventions should strengthen the overall capacity and accessibility of the social fund rather than treating the dimensions as entirely independent. Sustained improvements in children's well-being are likely to require complementary livelihood, social protection, education, health and community-support measures that reduce caregivers' dependence on limited emergency resources.

LIMITATIONS OF THE STUDY

Several limitations should be considered when interpreting the findings. First, the cross-sectional design identifies statistical associations but cannot establish temporal order or causality. Second, the regression models explain modest proportions of variation, particularly for shelter and care, indicating that important determinants of child well-being were not captured by the three social-fund dimensions. Third, the PCA output available for this revision contains 12 rather than all 13 questionnaire indicators, and the original KMO and Bartlett's test statistics were not available for verification. Fourth, the rotated component matrix demonstrates conceptual overlap among adequacy, dependability and availability, which means that individual regression coefficients should be interpreted as conditional associations rather than as isolated effects. Finally, the well-being measures are based on caregiver responses and may therefore reflect perceptions of service access rather than independently verified service utilisation.

RECOMMENDATIONS

First, SILC programmes and development partners should strengthen complementary livelihood and income-generating interventions for caregivers so that households can meet children's needs beyond emergency assistance. Diversifying household livelihood opportunities may reduce excessive reliance on the social fund and improve resilience to financial shocks.

Second, SILC groups and implementing partners should strengthen the availability and adequacy of social-fund resources while maintaining transparent, equitable and clearly communicated access procedures. Because availability was positively associated with all four outcomes, mechanisms that ensure resources can be mobilised when emergencies arise should receive particular attention.

Third, education-related support should be strengthened through complementary interventions such as school-feeding initiatives, targeted educational assistance and support for indirect schooling costs. This recommendation is warranted because education recorded the weakest descriptive outcome and because the qualitative evidence indicates that the social fund may assist with specific school-related expenses without necessarily covering the full cost.

Fourth, development partners should avoid treating the SILC social fund as a substitute for formal social protection and essential public services. The low explanatory power of the shelter-and-care model demonstrates that child well-being is shaped by broader household and environmental conditions. Community-

based financial mechanisms should therefore be linked to wider social protection, health, education, housing and livelihood interventions.

Finally, future studies should use longitudinal or repeated-measures designs to examine how changes in social-fund availability, adequacy and dependability relate to changes in child well-being over time. Future research should also retain and document all questionnaire indicators in the PCA dataset and report complete diagnostic statistics, including KMO and Bartlett's test, to strengthen reproducibility and construct validation.

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Conflict of Interest

No conflict of interest was reported in the source manuscript.

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