Title

Does the Community-Driven Development Approach Enhance Livelihoods? Evidence from Tanzania

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Abstract

This article determines the impact of the community-driven development (CDD) approach of the second phase of the Lake Victoria Environmental Management Project (LVEMP II) on livelihood enhancement in Kwimba District, Tanzania. The paper specifically examines determinants and levels of participation; and the impact of participation in the CDD subprojects on income and asset accumulation, using a sample of 210 households. Data analysis employed Ordinary Least Squares (OLS) regression and thematic content analysis for quantitative and qualitative data, respectively. Findings indicate that education level, matching grants, and membership in community groups determine participation in the CDD subprojects. There is a moderate level of participation in the CDD subprojects stages. Findings further show that households participating in the CDD subprojects were found to earn 6% more income and own 10% more assets than their non-participating counterparts. It is recommended that policymakers design and implement context focused CDD subprojects for them to have impact.

Key words

Key dates

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Introduction

The research reported in this article sought to determine the impact of the CDD approach of the LVEMP II on livelihood enhancement in Kwimba District, Tanzania. The CDD approach has emerged as a reaction to the failure of earlier approaches targeted at enhancing livelihoods. Yet, evidence of the efficacy of the CDD approach in enhancing livelihoods, particularly in Tanzania, is scarce and mixed. The paper is organised as follows: a background is presented, followed by sections on the conceptual framework and materials and methods. Moreover, the study's results are espoused and discussed, the conclusions and policy implications of the study's findings.

Background

Three out of five of the world's poor are now residing in Africa, particularly in rural areas, earning their living predominantly through farming (Christiaensen and Hill, 2019). Given this, their livelihoods, particularly those residing in sub-Saharan Africa, are experiencing uncertainties, shocks, and stresses (Fisher et al., 2017). It is against this, governments and donor agencies have been paying attention to the poor in their efforts to reduce poverty. This is through adopting different bottom-up approaches in projects and programs to poverty reduction such as CDD approach, participatory approach, community economic development, asset-based approach, area-based approach, community-based approach, spiritual-psychological approach, rights-based approach, and welfare approach (Quimbo et al., 2018; Esenaliev et al., 2016).

In particular, the CDD has emerged as a new approach following the inability of the top-down poverty reduction efforts to translate into improved livelihoods for the targeted community groups. It is defined as an approach that bestows the community groups power over control of decisions and resources (Dongier et al., 2001). The basic assumption of the CDD is that communities are the best judges of how their livelihoods can be enhanced if appropriately guided (Dongier et al., 2001). It has become a popular instrument in recent years for promoting economic and social development, employed in both small and large-scale operations. Yet, Heinrich and Lopez (2007) draw attention to the fact that the CDD is likely to work best in small-scale projects that are geographically focused since they do not need complex technologies and take advantage of local cooperation.

The nexus between the CDD and livelihood enhancement stems from the recognition that CDD is built on the idea that beneficiary participation can lead to improved identification of community needs, more effectively designed interventions, more poor inclusion, and more efficient resource usage (El-Kogali et al., 2015). All these have resulted in enhanced development outcomes and poverty reduction in different countries (Mansuri & Rao, 2004). Nevertheless, there are disputes among researchers and development practitioners on the implications of the CDD approach on livelihood enhancement. Opponents of the CDD set a shrewd critique that the approach is vulnerable to local elites or prime movers who benefits instead of the poor (Saguin, 2018). On their part, proponents of the CDD argue that the CDD enhances livelihoods through improved income and asset accumulation (Madu et al., 2013). Yet, most lessons are drawn widely from South Asia, while evidence is relatively scarce, particularly in Sub-Saharan Africa and East Asia (Barooah et al., 2019), where poverty levels are becoming more pronounced (Christiaensen and Hill, 2019). This scarcity of evidence is attributable to the assertion that CDD is a new approach that is still evolving (Rahman, 2019) from other community-based development approaches. In addition, most evidence and practices reported in different countries cannot be scaled up in other new contexts because there is no best practice that applies across the board, which makes CDD context-specific (Rahman, 2019).

The World Bank has been the largest donor agency funding and employing the CDD approach. By 2019, it supported 199 CDD projects valued at USD 19.7 billion in 78 countries (Barooah et al., 2019), notably in India, Bangladesh, Brazil, Mexico, Indonesia, Zambia, Malawi, and Tanzania. In Tanzania, the CDD has been used as a way to design and implement development projects for poverty reduction. Some of these projects include Tanzania Social Action Fund (TASAF), and LVEMP II (EASWN, 2014; Romanowski, 2020). In particular, LVEMP II as a CDD project was implemented in Tanzania over a nine-year period (2009–2017) through World Bank support to protect the vulnerable watershed areas along the Lake Victoria Basin (LVB). It adopted the CDD in its watershed management component, targeting the poor and vulnerable households in restricted areas delineated for conservation in the River Simiyu sub-catchment connected to LVB in Mwanza and Simiyu regions. LVEMP II organized targeted households into groups and provided training and matching grants to design and implement CDD subprojects with the hypothesis that they could improve their livelihoods within a short period of time. The CDD subprojects consisted of a range of activities, including agriculture, horticulture, poultry, horticulture, beekeeping, and milling machine subprojects (EASWN, 2014).

Nonetheless, the efficacy of the CDD approach in Tanzania has yielded mixed livelihood outcomes. While some studies have shown that the CDD enhances livelihoods (De Hoop et al., 2020; Kim et al., 2019; Evans et al., 2016), others (Mtelevu and Kayunze, 2014) have indicated that the approach does not improve the livelihoods of the participating groups. Amidst the divergent debates, there is a concern that most of the latter studies (De Hoop et al., 2020; Evans et al., 2016; Mtelevu and Kayunze, 2014) have confined their focus to the impact of the CDD adopted in the social funds, and none was found concerning the impact of the CDD approach of LVEMPII. It is probable that traditionally, the CDD has been used by social funds (Arnold et al., 2014). In addition, critics of the CDD are passionate about the need for additional evidence that the CDD operates

better than the alternative before investors start large-scale investment programmes (de Regt, 2017). The gist of this paper is to investigate the implications of the CDD of the LVEMP II on livelihood enhancement in Kwimba District, Tanzania. This paper specifically investigates determinants and levels of participation in the CDD subprojects and the impact of the CDD subprojects on income and asset accumulation. The findings are expected to contribute to informed decision-making at different levels and add stimulus to an active debate about the efficacy of the CDD approach.

Conceptual framework

In this article, demographic (e.g., age, gender, and household size), socio-economic (e.g., education level, income, ownership of land, ownership of livestock, membership in community groups, shock, and primary occupation), and institutional (e.g., matching grants and counterpart fund contribution) factors may determine the level of participation (Gashu & Aminu, 2019; Mbeche et al., 2021) in the CDD subproject. On the other hand, the level of participation in the CDD subprojects can result in livelihood enhancement for households in terms of increased income (Barooah et al., 2019) and asset accumulation (Fisher et al., 2017). The relationship between these various variables is depicted conceptually in Figure 1.

Figure 1: The conceptual framework for analyzing the impact of the CDD subprojects on livelihood enhancement
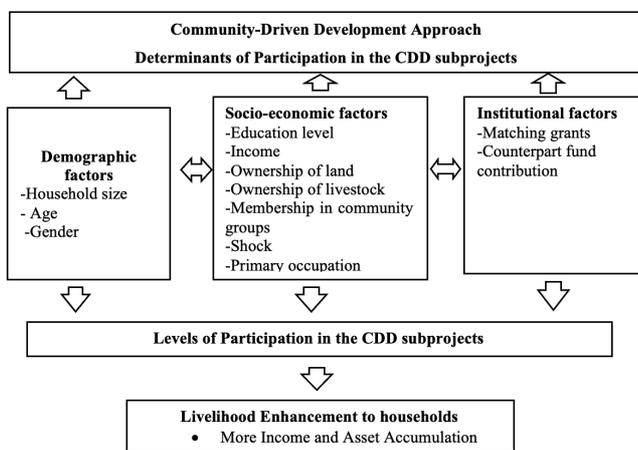
Materials and methods

Study area

This article is part of the larger mixed methods study titled: *Implications of the CDD on rural livelihood enhancement in Kwimba District, Tanzania.* The study was carried out between May 2021 and July 2021 in the Kwimba District, Tanzania (Figure 2). The district was specifically selected because it is among the districts where the CDD of LVEMP II was implemented (URT, 2018).

Study design and sample selection

This study applied a partially concurrent dominant status research design. According to Onwuegbuzie and Collins (2007), a partially mixed methods concurrent dominant status employs both quantitative and qualitative approaches in tandem, with the quantitative approach taking the dominant status. The design was relevant since it brings together the various strengths of quantitative and qualitative methods, therefore offsetting the weaknesses of every single method (Johnson & Onwuegbuzie, 2004).

The study used a three-stage sampling technique. In the first stage, only Kwimba District was randomly selected in the Mwanza region because of time constraints. In the second stage, the study villages were stratified into intervention (Mwabuchuma, Maligisu, Mwabalatulu, Kadashi, Kadashi, Nyashana, and Ng'wasweng'hele) and comparison (Sumaha, Isagala, Shilanona, Bujingwa, Isunga, Bungulwa, and Ng'hundya) villages. In the third stage, households were randomly selected from both intervention and comparison villages. The household was used as a unit of analysis because they participated in the CDD subprojects, and household heads were the respondents. FGD participants and key informants were purposively recruited with the assistance of district officials based on their experience and knowledgeability about the CDD subprojects. The study involved a sample size of 210 households because a sample size of 30 respondents is adequate in a study (Fasha and Minde, 2020). Both the intervention and comparison groups involved 105 households each as recommended by Jamilu et al., (2015). Besides, a purposive sample of 9 key informants and 40 FGD participants were considered.

The data were collected through a cross-sectional survey with a structured questionnaire, key informant interviews (KIIs), and focus group discussions (FGDs). Due to low literacy levels in rural areas (Ochepo, 2016), the pre-tested structured questionnaire was directly administered to both intervention and comparison households by the researcher and trained and supervised research assistants. The households participated voluntarily, and confidentiality was assured for their responses. Four FGDs were conducted in four out of seven intervention villages, and each FGD was comprised of 6 to 10 selected household heads. The FGD sessions were carried out by a moderator and research assistants using an FGD guide. Each session of FGD lasted for 90 minutes. Besides, KIIs were carried out by the researcher using a KII guide, and each took approximately 45 minutes. The FGDs and KIIs were audio-recorded with consent from the respondents.

Figure 2: Location map of study areas
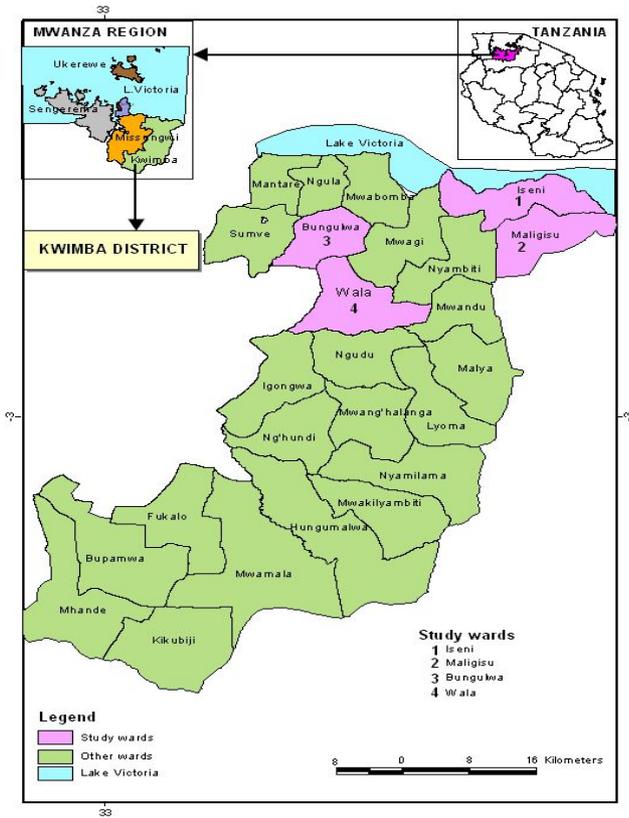
Statistical data analysis

The study employed quantitative and qualitative data analysis techniques. Thematic content analysis was used to analyse the qualitative data, with themes being identified, sorted, and incorporated into the findings. To assess the determinants of participation in CDD subprojects, a binary logistic regression model was employed as follows:

$$\text{logit}[\pi(x)] = log\left(\frac{\pi(x)}{1 - \pi(x)}\right)$$
$$= \beta_O + \beta_1 X_1 + \beta_2 X_2 \dots + \beta_{12} X_{12}$$
$$+ \varepsilon_i \quad (1)$$

Where: $\pi(x) = P(Y = 1/X = x) =$ as a dependent variable predicts active participation of different values of independent variables; $X_1 \, to \, X_{12} =$ independent variables; $\beta_1 \, to \, \beta_{12}=$ model parameters; $\varepsilon_i=$ disturbance term. The coding and descriptions of the variables are presented in Table 1.

Table 1: Variables included in the binary regression model

Variable name	Variable description/measurement	Variable type
a) Dependent variable		
Participation	Households' level of participation in the CDD subprojects (1 = active, 0 = otherwise)	Binary
b) Independent variables		
Shocks (X_1)	"1" if a household experienced food insecurity in the last 12 months, "0" otherwise..	Binary
Age (X_2)	Age in years	Continuous
Sex (X_3)	"1" if the household head is a male, "0" otherwise.	Binary
Household size (X_4)	Number of household members.	Continuous
Education (X_5)	Years of schooling	Continuous
Land ownership (X_6)	Total land owned by a household (in ha)	Continuous
Membership in groups (X_7)	"1" if the household head has membership in any community/economic group, "0" otherwise.	Binary
Income (X_8)	Total annual income earned during the previous 12 months from multiple sources of income such as crop sales, nursery trees, livestock, salaried work, casual labour, CDD subprojects, and household enterprises; remittances; and credit.	Continuous
Livestock asset ownership (X_9)	Livestock asset units are calculated using a Tropical Livestock Unit (TLU), that is, the number of livestock converted to a uniform unit, whereby cattle = 0.5, sheep = 0.1,	Continuous

	goats = 0.1, pigs = 0.2, and chickens = 0.01 (Njuki et al., 2011).	
Matching grants (X_{10})	The amount of the matching grant transferred by LVEMP II to support the CDD subprojects.	Continuous
Counterpart fund (X_{11})	"1" if the counterpart fund contribution was money, and "0" otherwise.	Binary
Primary occupation (X_{12})	"1" if the main occupation is agro-pastoralism; 0 = otherwise	Binary

The level of participation in the CDD subprojects was measured using a participation index calculated using 17 participation indicators. A five-point Likert scale was used to rate the indicators, with 1=very low, 2=low, 3=moderate, 4=high, and 5=very high. The indicators were used to compute participation index by adding the 5 responses to get 15 which were then divided by 5 to get 3.0. Given this, 3.0 was considered as the grand mean, with mean $\geq$ 3.5=high participation, < 3.5 $\geq$ 3.0 =moderate participation, and mean < 3.0=low participation.

To determine the impact of CDD subprojects on the income and asset accumulation, ordinary least square (OLS) regression was employed premised on Zada et al. (2022). Model 2 and 3 were estimated as follows:

$$Income_i = \alpha_0 + \alpha_1 CDD\ subproject_i + yK_h + \varepsilon_i \tag{2}$$
$$WealthIndex_i = \beta_O + \beta_1 CDD\ subproject_i + yV_h + \varepsilon_i \tag{3}$$

Where $Income_i$ and $Wealth_i$ =measure the level of income and wealth for the $_i$th household; $CDD\ subproject_i$ = measures if a given household participated or otherwise; K_h and V_h = household level control variables ; α_1 and β_1 = Impact of CDD subprojects on income and wealth; ε_i = disturbance term; α_0 and β_O = Constant (Table 2).

Table 2: Variables included in the OLS regression model

Variable name	Variable description	Variable type
c) Dependent variable (s)		
Income	Annual household income from multiple sources.	Continuous
Wealth Index	Current value (TZS) of selected durable assets.	Continuous
Household level control variables		
Age	Age of household head (in years)	Continuous
Sex	Respondent's sex (1=male, 0=female)	Binary
Household size	Household size is the number of household members who share the same kitchen for about six months.	Continuous
Education	Education level of respondent (years of school)	Continuous
Health status	If anyone in the household been so sick in the past 12 months that they fell bed-ridded. 1 if yes, 0 otherwise	Binary
Entrepreneurship training	If received entrepreneurship training in the last 12 months. 1 if yes, 0 otherwise	Binary
CDD subproject	1 if household head participated, 0 otherwise	Binary

Results

Characteristics of respondent households

Table 3 summarises the characteristics of the participants and non-participants. The results show that most of the participants (81%) and non-participants (57.1%) were males. There was no significant difference (p> 0.05) between participants and non-participants concerning their primary occupation, vulnerability to shock, and education level. The involvement in community groups was higher among participants (92.4%) than for non-participants (31.4%). The participating household heads were older (57.7 years on average) than the household heads who did not participate (42.24% on average). There was a significant difference (p = 0.000) between participants and non-participants concerning the household size. The participants had larger household sizes (10.4) than their non-participant (7) counterparts.

Table 3: Summary statistics of the characteristics of the respondents (n=210)

Categorical variables	Participants		Non-Participants		χ^2
	F	%	F	%	
Sex: Male (yes=1)	85	81.0	60	57.1	13.926*
Occupation: Agro-pastoralism (yes=1)	97	92.4	95	90.5	5.172
Membership in groups (yes=1)	97	92.4	33	31.4	82.708*
Shock: Food insecurity[a] (yes=1)	15	14.3	10	9.5	1.135
Continuous variables	**Mean**	**SD**	**Mean**	**SD**	**Mean differences**
Age of the household head (years)	57.7	11.8	42.4	15.5	15.210*
Education level (years spent in school)	7.0	2.5	6.3	4.1	0.686
Household size (Number of members)	10.4	5.2	7.0	4.0	3.410*
Land holding (acres)	8.5	7.6	5.2	10.8	3.286**
Livestock assets (TLUs)	3.8	5.3	1.7	4.7	2.156**
Annual Income (TZS)	4497867	6003570	2472681	4088090	2025186**
Wealth Index	2.95	3.59	1.46	1.16	1.496*
Number of responses	**105**		**105**		

*, ** denote significance at the 1 and 5% levels, respectively.
[a] Shock indicates if a household experienced food insecurity in the past 24 months.

The participants had higher land holdings (10.4 acres) than their non-participant counterparts (7 acres), and this difference was statistically significant (p = 0.011). There was a significant difference (p = 0.002) in livestock ownership between participants and non-participants, whereas participants had a higher number of livestock units (3.8) than

non-participants (1.7). Participants had a higher average annual income (TZS 4497867[1]) than their non-participant (TZS 2472681[2]) counterparts. The average wealth index (out of 25 durable assets) for participants (2.95) was higher than for non-participants (1.46) and this difference was statistically significant (p = 0.000).

Determinants of participation in CDD subprojects

Table 4 presents the results of a binary logistic regression model 1 on the determinants of participation According to the results, the model as a whole explained between 21.4% (Cox and Snell R^2) and 28.8% (Nagelkelke R^2) of the variation in the dependent variable, and correctly classified 62.8% of cases. Of the 12 independent variables tested in the model, three variables, such as education level, matching grants, and membership in groups, were found to be statistically significant.

Table 4: Results of binary logistic regression model (n=210)

Variables	B	S.E.	Wald	df	Sig.	Odds Ratio
Shocks	-0.235	0.225	1.090	1	0.296	0.790
Age	-0.012	0.024	0.247	1	0.619	0.988
Sex	-0.321	0.656	0.239	1	0.625	0.726
Household size	0.058	0.061	0.906	1	0.341	1.060
Education level	0.187	0.101	3.459	1	0.063*	1.206
Land ownership	0.015	0.015	0.935	1	0.334	1.015
Membership in community groups	3.192	1.256	6.457	1	0.011**	24.349
Annual Income	0.000	0.000	2.252	1	0.133	1.000
Livestock ownership	0.000	0.033	0.000	1	0.986	0.999
Matching grants	0.000	0.000	8.445	1	0.004**	1.000
Counterpart fund payment	0.000	0.000	0.082	1	0.774	1.000

Source: Field Survey (2021)

Note: **indicates significance at 5% and * 10% probability levels

Levels of participation in the CDD subprojects

Table 5 shows results on households' participation across the four stages of the CDD subprojects. Overall, the findings show a mean PI of 3.38, which ranges from a low of 2.6 at M&E to a high of 3.9 at decision-making. The results also show a mean PI of 3.9 during decision making which is high. Furthermore, results of PIs showed that there were high levels of households' participation among the measured indicators from 4.31 to 3.69 in the decision-making stage.

[1] Equivalent to USD 1946.98 according to the Bank of Tanzania (BOT) exchange rate of June 2021

[2] Equivalent to USD 1070.34 according to the BOT exchange rate of June 2021

The results also show that participation in implementation was high (mean = 3.56), because household heads associated implementation with the financial benefits they received (mean = 3.61). Household heads showed a high level of participation in the actual implementation of activities (mean = 4.12) and a low level of participation (mean = 2.62) in the counterpart fund payments.

Table 5: Participation index across the stages of CDD subprojects (n=210)

	Variable	PI (Mean)	SD
Decision making	Sensitization and awareness meetings	4.31	1.35
	Setting the goal of the project	3.88	1.64
	Decision making meetings	3.86	1.57
	Needs assessments	3.84	1.56
	Project Identification	3.82	1.54
	Acquisition and control of resources	3.69	1.54
	Mean PI	**3.90**	**1.53**
Implementation	Actual implementation of activities	4.12	1.33
	Managing work and budget	4.07	1.44
	Procurement of goods and services	3.42	1.35
	Counter fund contribution	2.62	1.79
	Mean PI	**3.56**	**1.48**
Benefit sharing	Share financial benefits	3.61	1.64
	Share nonfinancial benefits	3.42	1.77
	Share both financial and non-financial benefits	3.32	1.73
	Mean PI	**3.50**	**1.71**
Monitoring and evaluation	Reviewing project progress and performance	3.57	1.26
	Assessing achievement of project deliverables	3.51	1.18
	Determine whether project addresses community needs	2.64	1.32
	Writing physical progress report	0.68	0.25
	Mean PI	**2.60**	**1.00**
Overall	**Overall PI across the stages**	**3.38**	**1.43**

The level of participation in the benefit sharing is high (mean=3.5). The specific PIs during this stage varied from 3.61 to 3.32. The index for financial benefit sharing was higher (mean=3.61) than for non-financial benefits (mean=3.42). On the other hand, the results in Table 5 also show that participation in M&E was lower (mean = 2.6) compared to other stages.

Impact of the CDD subprojects on Income and Asset Accumulation

Table 6 presents the results of the impact of the CDD subprojects for the estimated models (2) and (3). The results in models 2 and 3 show that the R^2 of the income and wealth indexes is 0.304 and 0.126, respectively, implying that CDD subprojects contribute 30% to predicting income and 13% to predicting wealth. Yet, R^2 is not regarded as the most accurate overall measure of the general fit of a linear probability model (Studenmund, 2011). The finding in Model 2 indicates that participants in CDD subprojects earn 6% more income than their counterparts. Similarly, findings in Model 3 indicate that participants own 11% more assets (out of the 25 durable assets included in the wealth index) compared to their counterparts.

Table 6: OLS Regression Model (n=210)

Independent Variable (s)	Model 2 Log (Income)	Model 3 Wealth Index
CDD subproject (=1)	0.617	1.099
	(0.009)**	(0.016)**
Age	0.183007	-0.002074
	(0.009)	(0.877)
Education	0.1518712	0.0458495
	(0.000)	(0.404)
Household Size	0.0645917	0.1371182
	(0.002)	(0.001)
Sex	-0.1203305	0.0298401
	(0.576)	(0.943)
Training	0.2451238	-0.2905842
	(0.311)	(0.535)
Constant	12.61889	0.3078847
	(0.000)	(0.696)
Observations	**210**	**210**
R-squared	**0.304**	**0.126**

*Significant at 10%,** Significant at 5%, and ***Significant at 1%

Discussion

Determinants of participation in CDD subprojects

The education level of the household head was a significant ($p \leq 0.1$) predictor of participation at $p = 0.063$. Findings imply that a household head's education level significantly associated with participation in the CDD subprojects. This suggests that the more the number of years spent in formal education the higher the level of participation in the CDD subprojects for livelihood enhancement (Table 3). Obadire et al. (2014), observed that the number of years spent in formal education is one of the crucial factors for a high level of programme participation because education catalysis the information flow process and encourages people to explore various avenues for learning about the project and its benefits.

Similarly, matching grant was also a significant ($p \leq 0.05$) predictor of participation. It implies that the matching grant statistically had a significant association with participation in the CDD subprojects. Households that were expected to get matching grants were more likely to participate in the CDD subprojects than their counterparts. As narrated during the KIIs and FGDs that households regarded matching grants as instruments to initiate their CDD subprojects, taking into consideration that their own mobilised resources were inadequate to support their livelihood strategies. This made some households passive in engaging in the CDD projects. This was also observed by Bednarska-Olejniczak (2021), who claimed that grants are used to encourage the participation of local communities that are either passive or excluded from rural development programs.

The logistic regression results show that group membership was among the significant ($p \leq 0.05$) predictors of participation. Findings demonstrate that group membership statistically had a significant association with participation in the CDD subprojects. Households organised into groups were more likely to participate than those who were not in groups. FGD and KII participants amplified that it was therefore necessary for the households to formulate groups, with 45 members each. This was confirmed by a male key informant at Maligisu village, who noted that; "*LVEMP II came with the condition that all households were required to form groups and propose their preferred CDD subprojects before being funded.*" The quotation suggests participation in CDD subprojects is channelled through securing membership in groups, which foster collective decision making in the pursue of livelihood strategies. This finding is similar to that of Abdalla and Manase (2017) who reported group membership was linked to participation in educational projects in Zanzibar.

Levels of participation in the CDD subprojects

The overall level of participation across the four stages was moderate, implying that the CDD approach was adopted moderately in the CDD subprojects with a moderate level of households' participation. A possible reason was due to the moderate incorporation of CDD elements in CDD subprojects. The overall level of participation reported here is lower than in other African countries (Hassan et al., 2018). Elsewhere, disparities in the overall level of participation are attributable to the assertion that CDD varies in terms of objectives, context, country (Mansuri & Rao, 2004) and how participation is measured by researchers (Mbeche et al., 2021).

The high mean (3.9) during decision making stage indicates that the CDD subprojects involved participatory decision making, which encouraged control over decisions and resources, which are important in overcoming exposure to vulnerability. This is not surprising because the CDD model encourages participatory decision-making, control over resources, and local capacity building (Ayeni and Odeyemi, 2015). On the other hand, the level of participation in implementation was high (mean = 3.56), indicating that the household heads were taking the lead and were in charge of the execution of activities in their CDD subprojects. This was attributable by the fact that the participating households were obtaining financial benefits (mean=3.61). A study by Hassan et al. (2018) also reported similar findings of high participation at the implementation stage of CDD projects.

The level of participation in the benefit sharing is high, indicating that the participating households were benefiting from their efforts. High level of participation in this stage was attributable to the financial benefits received by the households (mean=3.61). The level of participation reported in the study is higher than that reported in other African countries (Guntoro et al., 2016). Elsewhere, variations in the level of benefit sharing are attributable to the disparities of community involved, project types, and the nature of participation (Obadire et al., 2016). Besides, the low level of participation in M&E, suggests that the household heads were not involved as much in the M&E of the CDD subproject activities. Most KIIs and FGD participants explained that limited household awareness of how M&E was to be performed and a negative attitude towards M&E involvement, which was caused by most CDD subproject activities being carried out by district officials and members of the community management committee, who then reported back to the members of the local community groups, were the reasons for the low participation in this stage. Similar findings were reported by Chifamba (2013) in Zimbabwe, who found that M&E of the community project activities was mostly carried out by the project implementers, who subsequently reported back to the local communities.

Impact of the CDD subprojects on Income and Asset Accumulation

The results indicate that participating households earn more income and own more assets than their counterparts. Findings suggest that CDD subprojects align with livelihood enhancement agendas as participatorily designed and implemented; they enhance income and asset accumulation. In other words, the CDD approach has proven to work best in small-scale projects that are context-specific, as noted by

Heinrich and Lopez (2007). The finding is attributable to the participatory and demand-driven nature of the CDD approach, which was embedded in the CDD subprojects and gave voice to the participating households. The result confirms the finding from Nigeria by Madu et al. (2013), who reported increased income and values of the productive assets of Fadama II CDD project participants compared to their counterparts and disagrees with those of Mtelevu and Kayunze (2014) in Tanzania, who did not find any impact of the CDD subprojects of TASAF on the beneficiaries' incomes. Elsewhere, disparities in CDD interventions' findings are linked to variations in objectives, context, and country (Mansuri & Rao, 2004) and the absence of a comprehensive theory explaining CDD's effectiveness (Romanowski, 2020).

Conclusion and policy implications

The study investigated the implication of the CDD approach on livelihood enhancement in Kwimba District, Tanzania, through examining the determinants and levels of participation and the impact of participation on income and asset accumulation. The education level, membership in community groups, and matching grants determine the levels of participation in the CDD subprojects. Besides, the participation level in the CDD subprojects was moderate throughout all stages. Participation in CDD subprojects enhances households' livelihoods by increasing income and asset accumulation. It is recommended that policymakers and project designers prioritise education level, matching grants, and group membership during design and implementation to ensure optimal local participation in CDD subprojects. Local government officials and development partners should focus on training and raising awareness about participatory M&E among local people through village meetings. The CDD should be utilised by policymakers, development agencies, and project designers to design and execute context-specific, small-scale projects for livelihood enhancement.

Declaration of conflicting interests

The authors affirm that they have no financial or interpersonal conflicts that may have influenced the research presented in this study.

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