

Implementation of Community-Based Targeting Mechanism: A Local perspective in Lindi District, Tanzania

Gidion O. Njuga¹ Benedicto B. Kazuzuru² William B. Warsanga³

¹Department of Banking, Accounting and Finance, Moshi Co-operative University, Tanzania, gidionjuga@gmail.com

²Department of Biometry and Mathematics, Sokoine University of Agriculture, Tanzania, kazuzurub@gmail.com

³Department of Economics and Statistics, Moshi Co-operative University, Tanzania, wbaranos@gmail.com

ABSTRACT

Article info

Deciding on which poor households' targeting mechanism is appropriate has always been a challenge to policymakers. Given the challenge, Tanzania adopted Community Based Targeting (CBT) for poor households' cash transfer programme. The design was expected to increase the legitimacy of the programme at the local level, though it is exposed to elite capture and information distortion, which may, in turn, negatively affect the legitimacy level of the programme. This paper assesses community perceptions of the CBT Mechanism in Lindi District and determines households' factors influencing community perception of the transfers. Likert scale data were collected and analysed using factor analysis, ordinal logit regression and the Mann-Whitney U test. The community perceived the performance of the mechanism as average, although complaints of exclusion and inclusion errors were reported. The threshold set by programme design, information distortion and other implementation flaws were blamed for such errors. Moreover, the paper indicates that the sex and participation status of respondents influenced the community's perception of the CBT mechanism. Beneficiary households were more likely to be aware of the villages' meetings conducted to nominate eligible households than non-beneficiary households. The study recommends that programmes for targeting poor households should be designed in a way that the criteria set for households' participation are matched with the available resources. Moreover, the study suggests modification of the Productive Social Safety Net (PSSN) operational manual (URT, 2013) so that community actively participate in selecting and scrutinizing eligible households by removing the exclusion mandate from the hand of the Community Management Committee (CMC).

Article history

Received:
29/03/2021

Accepted
30/08/2022

Published:
30/09/2022

Keywords: CBT (CBT), Cash transfer, Community perception, Community participation

1.0 INTRODUCTION

Through the Tanzania Social Action Fund (TASAF), the Tanzanian Government has been implementing a conditional cash transfer programme for low-income households in pilot areas since 2005 (UNICEF, 2020). The government scaled up conditional cash transfers and introduced unconditional cash transfers in 2013 to consolidate the achievements of the pilot study. The objective was to reach out to the one million households living below the basic needs poverty line in 159 councils on Tanzania's Mainland (URT, 2013). The effect of free handouts on poor households towards poverty reduction is well documented. Studies have consistently demonstrated that cash transfers are immensely effective in alleviating extreme poverty throughout the world (Benasius, 2017; Dou, 2016)

Nonetheless, in the context where public resources are constrained, policymakers have been concerned with how best to target the intended individuals or households at a reasonable cost (Handa *et al.*, 2014). The question is of paramount importance as Verme and Gigliarano (2018) argue that the most accurate targeting mechanism might be expensive and less cost-effective while the less accurate one might be affordable and cost-effective. The need to balance both targeting accuracy and costs underlines the challenges that governments come across in identifying poor households and generating mechanisms for delivering the benefits. As Molyneux *et al.* (2016) assert, inaccurate identification and targeting of poor households have been one of the factors contributing to the failure of cash transfer programmes.

To address the challenge of accuracy and costs, the Government of Tanzania adopted Community Based-Targeting (CBT) to identify the poor (Evans *et al.*, 2014). CBT is a government policy of collaborating with community agents to identify recipients for cash transfers (Conning & Kevane, 2002). The approach raises the awareness of the villagers and hence allows the community to participate in setting pre-determined criteria for targeting and delivering cash transfers to poor households (Benasius, 2017). Village leaders call for meetings in which all the villagers are invited to air out their opinions on who deserves to participate in the programme. Households that the community perceive to be poor stand higher chances of selection, though their assessment is prone to subjectivity and may not conform to the design of the programme (Hypher & Veras, 2016). The involvement of the community is regarded as an efficient means of reducing identification costs and therefore increasing the legitimacy of the programme to the community (Stoeffler *et al.*, 2015).

Although community participation is expected to improve the social acceptability of the targeting decisions, unfairness concerns in the selection of poor households have been

reported in Malawi and Zimbabwe (Ellis & Manda, 2014; MacAuslan & Riemenschneider, 2014). The feeling that everyone deserves a share of government support and no one is poorer than the other has been reported to affect the social acceptability of identification mechanisms of poor households in most parts of Africa (Platteau *et al.*, 2014). Then again, involving society in the targeting mechanism creates the possibility of elite capture (Briggs, 2018). Indeed, some politicians and donors might be more interested in setting up organizations to meet their own needs, more than achieving poverty reduction (Nyamongo, 2012). The alignment of leaders' and administrators' perceptions with that of the community has always been challenging. Decisions about who and how to target regularly raise intense debate (Devereux *et al.*, 2015).

Efficient targeting, in particular, would succeed in limiting the inclusion and exclusion errors of cash assistance programmes (Bah *et al.*, 2018). Inclusion error occurs when the unintended households receive cash transfer benefits and exclusion error when the intended households do not receive cash transfer benefits. The flawed inclusion of households that are not part of the targeted population normally means that money is misused (Karlan & Thuysbaert, 2016). In contrast, exclusion error reduces the impact of the programme on poverty reduction (Kidd *et al.*, 2017). Inclusion and exclusion errors might be the outcome of the programme design or implementation weaknesses. Whether owing to the design or implementation, targeting errors, regardless of how small they are, have negative implications in terms of the community's trust in the government.

As Liu *et al.* (2018) assert, social trust affects the legitimacy of community-based programmes. In Niger, CBT has low legitimacy among the local population (Premend & Shnitzer, 2018). In contrast, the mechanism is more preferred by the local community in Indonesia than other targeting mechanisms such as Proxy Means Test (PMT). The degree of trust among residents and the way the targeting mechanisms are communicated and implemented could explain the difference in the outcomes between these two countries. In the context of Niger, the communities appear to suspect the manipulation risk and less trust in leaders who may be viewed as trying to benefit themselves. Therefore, understanding how the perception of a particular local community influences the relative performance of the chosen targeting mechanism cannot be overemphasized.

According to the World Bank (2018), in Tanzania, 86 per cent of the pre-listed households and 66 per cent of non-targeted households have positive attitudes toward the targeting mechanism. Moreover, it was found that the community did not think that personal interests

influenced the targeting mechanism. Notwithstanding these interesting findings, the Minister of State in the President's office, Public Service and Good Governance ordered the suspension of five TASAF officials after a verification exercise unearthed a total of 55,692 ghost households' beneficiaries of cash transfers (Mbago, 2016). The audit conducted in 2017 indicated that there were 73,561 phantom beneficiaries and 22,034 ineligible households (Kamagi, 2020). Such statements and audits suggest the existence of elite capture in the targeting of poor households in the TASAF programme.

On the other hand, Kurdi *et al.* (2018) found that in a particular locality, subjective perception of the targeting effectiveness reflects the quantitative results in the same area. Therefore, the inconsistency of the findings may be instigated by political, historical, social and cultural factors, which are likely to influence community trust in perceptions-gathering teams. The World Bank's reliance on government agencies in data collection may compromise results since beneficiaries might be pressured to provide convenient information. Moreover, most studies (White, 2018; Nssah, 2018; Brown *et al.*, 2017) ignore the fact that poor household mistargeting may arise after the identification exercise is concluded. The list of the names identified during the identification exercise may differ from the list of the actual recipients of the cash transfer.

Thus, in reducing subjectivity, this study avoided the direct use of government agencies in data collection. Moreover, since the moderator has no direct link with the partners of the programme, the effect of sponsor bias was minimized. The moderator reiterated the independence status whenever possible. Informed of the possibility of mistargeting after the identification exercise, the study sought to understand the payment system and the extent of inclusion and exclusion errors during the identification and implementation stages.

Furthermore, the reviewed literature reveals a lack of a formal comprehensive assessment of the community's perception of cash transfer targeting mechanisms in Tanzania. Although recent trends indicate an increasing number of studies on cash transfer programmes, particularly on TASAF-related programmes (Mzingula & Madeye, 2020; George & Ulriksen, 2021; Prencipe *et al.*, 2021; Mohamed & Hamad, 2022), community perception of the targeting mechanism is rarely discussed. In a participatory programme design such as the cash transfer programme in Tanzania, the perception of the local community cannot be disregarded during the preparation, monitoring, evaluation, and design of the intervention. Understanding local community perceptions of cash transfer program implementation could help to increase the program's positive impacts (DFID, 2011). Moreover, Tanyanyiwa (2015)

asserted that successful participation requires a blend of various household factors. Thus, the objectives of this paper are to (i) assess local community perceptions of the implementation of a community-based targeting mechanism and (ii) identify household factors influencing local community perceptions of the community-based targeting mechanism.

2.0 COMMUNITY TARGETING MECHANISM AND THEORETICAL FRAMEWORK

2.1 Community targeting mechanism

The targeting mechanism carries various definitions based on the question the study intends to address. Targeting, according to Weiss (2005), is the process of using policy tools to identify the disadvantaged within a population. According to Weiss (*ibid*), the targeting process ends when the identification of the poor is concluded. On the other hand, targeting is described by Mooij (1999) as the identification and selection of particular groups, households, or people to distribute benefits to them. Mooij's (*ibid*) definition includes the broad view of targeting which contemplates the distribution of benefits as part of the targeting process. This study adopts the definition propounded by Mooij (1999) because while correct identification of the poor may be achieved, there is the possibility of mistargeting during the distribution of benefits. Money intended for poor households may end up in the hands of fraudulent leaders.

While there are several targeting mechanisms, including the Proxy Means Test (PMT), geographic targeting, the Household Economy Analysis (HEA), and others, there is an increasing focus on community-based targeting mechanisms. Community targeting is a subset of community participation. Therefore, its main assumption is that communities lead the decision-making process. This community-led arrangement includes three key elements: awareness creation, selection of beneficiary households and distribution of benefits. All these elements involve some level of community participation. A failure appropriately to balance these levels of community participation inevitably leads to one of the two types of errors associated with targeting. These include the errors of under-coverage or exclusion and the error of leakage or inclusion. Programmes are deemed effective if they can minimize inclusion and exclusion errors while keeping low-targeted costs. Thus, the study conceives that the effectiveness of a community-based targeting programme is determined by the levels of community awareness and participation in the selection of beneficiaries and distribution of benefits.

2.2 Ladder of citizen participation theory

The study draws insights from the ladder of citizen participation theory developed by Arnstein (1969). Arnstein (*ibid*) asserts that citizens may collaborate with governmental organizations, political figures, non-profits, and private sector groups to develop or carry out public policies and programmes, though the level of participation varies. Arnstein classifies these degrees of participation into eight rungs namely, manipulation, therapy, informing, consultation, placation, partnership, delegated power and citizen control. Manipulation and therapy represent the lowest level of public participation or no participation at all. Informing, consultation and placation occupy the middle ground where the community is allowed only to express their views but they do not have real power to influence decisions. True and meaningful participation takes place on the last three levels, partnership, delegated power and citizen control. The theory has been widely applied in assessing community participation in various government programmes. For instance, Ndlovu and Ndlovu (2019) applied the theory to assess the contribution of local involvement in humanitarian decision making while Li (2020) applied the theory in assessing community participation in urban regeneration practices.

The theory is relevant in assessing who has the power in deciding on programmes, which adopted a community participatory approach such as the TASAF cash transfer programme. The assumption is that by involving the community, decision-making processes will become more inclusive, stimulate ownership of development processes, and ultimately result in more lasting effects. Scholars (*i.e.*, Thoman & Fliert, 2014; Christopher, 2020). However, Craig *et al.* (2017) argue that it is the degree of community participation in the specific programme, which affects the public perception of the legitimacy, authority, good governance and ultimately the outcomes. From Einstein's perspective, the community will positively commend the programme if meaningful participation is achieved. The theory was applied in this study to better understand the relationship between community engagement levels and their impression of CBT mechanisms.

The limitation of Arnstein's theory is the assumption that donors or the government provide all resources regardless of the level of community participation. Although this is the fact for TASAF cash transfers, in international development projects, donors do not always provide all of the resources.

3.0 METHODOLOGY

The study was carried out in the coastal town of Lindi District, Lindi Region, in the southeast part of Tanzania. Lindi, the third-poorest region of Tanzania, has 38 per cent of the population living below the national poverty line (World Bank, 2018). Lindi District has 14.8 per cent of the households registered for the cash transfer programme, making it the district with the highest proportion of households registered in the programme (URT, 2018). This makes the selected district, the appropriate area for studying Tanzania's targeting system for cash transfers.

The study used a cross-sectional design since it allows the examination of population data at a single moment in time and allows for the comparison of numerous factors at once without affecting the subjects (Setia, 2016). The way groups experience and benefit from cash transfers varies based on household characteristics and participation status (Weinstock, 2021). As such, to understand perception differentials between different groups, the study included both beneficiary and non-beneficiary households. Non-beneficiaries group included those vulnerable households, which did not receive cash transfers. Thus, the sample size was 398 (including beneficiary and non-beneficiary households) estimated by using Yamane's (1963) finite population formula (Appendix I). The ratio of 1:1 was used in the selection of beneficiary and non-beneficiary households. Therefore, each group constituted 199 households. The head of the household served as the primary responder, and each household was chosen as one study unit. Other responsible household members were chosen to reply to the questionnaire in the absence of the household head. Within each village, a proportionate sample size formula was used to determine the required number of households. Nine villages were systematically selected out of 88 villages registered for the TASAF programme in Lindi District. A list of beneficiaries' households was obtained from the TASAF Coordinator, and then a random number generator was used to sample the estimated number of households after coding each of them. Since obtaining the list of vulnerable non-beneficiary families was not possible, the selection process used the linear snowballing technique, in which each sampled head of a non-beneficiary household provided information regarding one more non-beneficiary household.

The characteristics of households and their perceptions of the CBT mechanism were gathered using a questionnaire. About 398 questionnaires were administered to households receiving and those not receiving cash transfers. Additionally, Focus Group Discussions (FGD) and

Key Informant Interviews (KIIs) were employed to gather qualitative data to validate the information from the survey. Ten FGDs were organized using self-selection sampling from the previously sampled households, each with seven participants from five villages (2 in each of the five villages). To discover how the perception of respondents differ, homogenous groups for the beneficiary and non-beneficiary households were created in each village. The number of FGDs was chosen using the theoretical saturation principle. Thirteen KIIs, nine of whom were Village Executive Officers and four were TASAF Coordinators were chosen based on their knowledge of TASAF programmes. Qualitative data were coded, transcribed and analysed using content analysis.

Ten items assessed the perception of cash transfer targeting effectiveness. On a 5-point Likert scale, the responses to the questions were assessed using these parameters: strongly disagree, disagree, undecided, agree, and strongly agree, ranging from 1 for strongly disagree to 5 for strongly agree. The five points were tallied. Cronbach alpha (α), as established by Gliem and Gliem (2003), was used to measure the internal reliability of questionnaire responses. The α is given in the equation below:

$$\alpha = \frac{rk}{[1+(k-1)r]} \dots\dots\dots (1)$$

Where α is the coefficient alpha; k is the number of items considered and r is the mean of the inter-item correlations. The assumption is that if variables measure the same item, they should be highly correlated and thus Cronbach alpha would increase. Therefore, the coefficient can test the internal consistency and reliability of variables. Cronbach alpha ranges from 0 to 1, however, as Nawi *et al.* (2020) observe, alpha should be above 0.8 for an instrument to have a good level of internal consistency. Some of the items in the questionnaire were dropped to obtain the required alpha results. The reliability test Cronbach alpha coefficient for community perceptions on targeting approach items was assessed to be 0.803. Based on this alpha, the identified variables can be used in assessing the CBT mechanism. A review of studies on the cash transfer theory of change allowed for the determination of the content validity.

Community perception on the implementation of the CBT mechanism was analysed using percentages of modes and perception index. The ordinal logistic regression model was used to assess household factors affecting residents' perception of the targeting mechanism and the differences in perception between the beneficiary and non-beneficiary households towards the targeting mechanism were analysed by the Mann-Whitney U test. The dependent variable

was ordinal and categorical; hence, the ordinal logit regression model was used. Y is limited to a five-point Likert item to prevent misunderstanding and incorrect interpretation of estimates. The general ordinal logit regression model is given as:

$$\text{Logit}(\pi(x)) = \beta_0 + \beta_1 X_1 + \dots + X_p \beta_p \dots \dots \dots (2)$$

Where: $\pi(x)$ = probability of adherence,

β_0 = Y intercept,

β_{1-p} = regression coefficients and,

X_{1-p} = set of predictors.

Variables, which were used on general ordinal logit regression, are described in Table 1.

Table 1: Description of Model Variables

Variable	Definition and Measurement Unit
Dependent Variable	Perception on targeting mechanism (very low = 1, low = 2, mild = 3, high = 4, very high = 5)
POT	
Independent Variables	
MAR (X_1)	Marital status (1 = Married, 0 = Not married)
AGE (X_2)	Age of household head (years)
HHS (X_3)	Household size (number of household members)
HHG (X_4)	Household head sex (1=Male; 0=Female)
EDU (X_5)	Education Level of household head (years of school)
OCU (X_6)	Household occupation (scores)
PAT (X_7)	TASAF Participation (1=Beneficiary; 0=Non-beneficiary)
YRS (X_8)	Years lived in a village (Number of years)
LAP (X_9)	Land for production (Number of acres)
LAH (X_{10})	Land for home (Number of acres)

Source: Literature Review (2021))

The likelihood ratio test was conducted to examine the overall significance of independent variables in estimating the dependent variable. The summary measures ($\chi^2=35.8$, $df=10$ and $p\text{-value} < 0.001$) indicate that as a whole, independent variables have a significant contribution in predicting the perception of the community on the CBT mechanism. Moreover, the model shows a higher chi-square value than other competing models. To find the overall goodness-of-fit, Hosmer and Lemeshow test statistic was obtained. The value of Hosmer and Lemeshow was $\chi^2=7.531$, $df=8$ and a $p\text{-value}$ of 0.481. The large $p\text{-value}$ shows that the difference between predicted and observed values is insignificant. This implies that the model fits quite reasonably. Additionally, the model was able to predict 68.8 per cent of

those with positive perception and 55.4 per cent of those with negative perception. Overall, 62.5 per cent of all cases were correctly predicted. In summary, the model is credible in analysing households' factors influencing community perception of the CBT mechanism. Moreover, Harpe (2015) recommends the Mann-Whitney U test in comparison to two independent groups when the independent variable is either ordinal or continuous, but not normally distributed. Mean rank was chosen because the distributions of scores for the beneficiaries and non-beneficiaries had different shapes. Mathematically, the Mann-Whitney U test for each group is presented as follows:

$$U_x = n_x n_y + n_x \frac{(n_x + 1)}{2} - R_x \dots \dots \dots (3)$$

$$U_y = n_x n_y + n_y \frac{(n_y + 1)}{2} - R_y \dots \dots \dots (4)$$

Where U_x and U_y are Mann-Whitney U test statistics for beneficiaries and non-beneficiaries respectively, n_x is the number of beneficiaries, n_y is the number of non-beneficiaries, R_x is the sum of the ranks assigned to beneficiaries and R_y is the sum of the ranks assigned to non-beneficiaries.

Table 2: Rotated components matrix and factorial loadings

Variable	Awareness	Selection	Distribution of benefits	Targeting efficiency
Fact. 1	0.692			
Fact. 2	0.631			
Fact. 3	0.715			
Fact. 4	0.660			
Fact. 5		0.732		
Fact. 6		0.706		
Fact. 7				0.826
Fact. 8				0.614
Fact. 9			0.764	
Fact. 10				
Fact. 11			0.733	
Fact. 12			0.651	
Fact. 13				
Fact. 14				
Fact. 15	2.725	1.539	1.45	1.2
Eigenvalue				
% Variance	24.49	15.99	15.41	12.83
Cronbach's Alpha	0.81	0.87	0.79	0.80

Source: Literature Review (2021) Extraction Mechanism: Principal Component Analysis. Four components were extracted.

The principal factor analysis was performed on the community's perception of CBT. To find multicollinearity in the data, the Kaiser-Meyer-Olkin (KMO), a Measure of Sampling Adequacy (MSA), was applied. KMO's maximum value is 1.0, but any value above 0.6 is acceptable (Krishnan, n.d.), and was 0.743 for this set of data, indicating that the variables

can be subjected to factor analysis. Bartlett's (1950) Test of Sphericity was used to assess the strength of the relationship between variables.

The test proved helpful in determining whether the variables in the population correlation matrix are uncorrelated, which was the null hypothesis. The analysis revealed a significance level of <0.001 , which is small enough to rule out the hypothesis (the probability should be less than 0.05 to reject the null). Thus, it can be concluded that the correlation matrix is not an identity matrix, as per the requirements of factor analysis.

Results of the rotated component matrix and factorial loadings are presented in Table 2. Factors with loading greater than 60 and Kaiser's Eigenvalue greater than one were retained. The correlation between variables was assessed using the oblique Promax rotation, which then revealed if the constructs were contained within the same theoretical framework. This resulted in four interpretable factors relating to the community's perception of CBT: awareness creation, selection process, distribution of benefits and targeting efficiency. The four factors accounted for a total variance of 68.7 per cent, with awareness accounting for 24.49 per cent of the variances; selection process accounting for 15.99 per cent, distribution of benefits accounting for 15.41 per cent, and targeting efficiency 12.83 per cent of the variances. The reliability tests showed consistency across four factors indicating 0.81, 0.87, 0.79, and 0.80 for awareness, selection process, distribution of benefits, and targeting efficiency respectively. The results revealed consistency in the community perceptions of CBT, that is, all four factors were perceived as critical to CBT.

4.0 FINDINGS AND DISCUSSION

4.1 Community perception of cash transfer targeting mechanism

Community perception of the cash transfer targeting mechanism was assessed. The specific areas assessed included, awareness of eligibility criteria, poor households' identification steps, and villagers' opinions on CBT. Others included village meetings to discuss eligible households, participation in the selection of poor households, attendance in the village meeting, inclusion and exclusion errors and appropriateness of payment structure and unpredictability of payment time. Nine items as shown in Table 3 measured all these. Findings indicate that 72 per cent of the respondents thought that the community was aware of village meetings to discuss eligible households when the scores of strongly agreed and agreed are combined. Moreover, 77 per cent of them agreed that villagers attended the meeting to discuss the selection of beneficiaries. This provides evidence that programme

coordinators and village leaders communicated the information about the cash transfer programme to villagers.

Nevertheless, awareness of the cash transfer identification steps was rated low at 37percent. The respondents perceived the level of awareness as either strongly agreeable (4%) or agreeable (33%). This shows that villagers were less aware of the whole mechanism of identifying poor households. Tokenism was the method of participation used whereby participants were just allowed to voice their opinions and had no meaningful influence. This was revealed through FGD consensus,

...The Community Management Committee (CMC) were the one deciding who should participate and who should not, the village meeting was just called to confirm their decision (Lindi district, 16 January 2020).

The above statement suggests that village leaders and CMC had more understanding of the identification steps than other members of the community did. A variation in levels of awareness was the outcome of the differentiated purpose of participation for each group. The purpose of participation for leaders was to enable them to identify the eligible households while for other community members participation was only to make them aware of the cash transfer programme. This variation in the levels of awareness gave leaders the upper hand in deciding who should and who should not participate in the programme.

Table 3: Community's perception of the implementation of the CBT mechanism

Items	SA%	A%	U%	D%	SD%	Total
1. Awareness						
Eligibility criteria	24	34	10	23	8	100
Identification steps	4	33	26	30	7	100
Village meeting	21	51	12	12	4	100
2. Selection						
CMC selection	7	41	15	29	8	100
Meeting attendance	25	52	12	6	5	100
Villager's opinions on CBT	20	20	17	15	28	100
3. Distribution of benefits						
Payment structure	24	21	56	7	3	100
The unpredictability of payment time	7	19	58	11	5	100
4. Targeting outcome						
No exclusion error	7	10	11	34	38	100
No inclusion error	14	20	25	24	17	100

Source: Data (2021)

Note: SA-Strongly Agree, A-Agree, U-Unsure, D-Disagree, SD-Strongly Disagree, Very high=80%-100%, High=60%-79.9%, Medium=40%-69.9%, Low=20%-39.9%, Very low=0-19.9%

These findings are consistent with the findings in a study by Kakwani *et al.* (2018) and Reshmi *et al.* (2017) which disclosed that a lack of community awareness about the programme and its targeting mechanism creates room for community leaders, programme coordinators and representatives of local councils to take advantage of the poor and the uninformed during targeting mechanism. This undermines cash transfer objectives and ultimately reduces its impact on poverty reduction. Both inclusion and exclusion errors were rated very low. Seventeen per cent of the respondents believed there was no exclusion error, while 34 per cent believed that there was no inclusion error. This implies that most respondents believed in the prevalence of exclusion and inclusion errors.

Exclusion error was mostly caused by the programme design and negligence. In some cases, poor households were excluded because they were absent from home when CMCs were registering eligible households. The threshold imposed by the programme on the number of beneficiaries required for each village was blamed for the exclusion of some poor households. This was supported by consensus from FDG participants,

...CMC were given the maximum number of beneficiaries required for each village, so when the threshold was reached, they couldn't add more people. (Lindi district, 15 January 2020).

The extract above reveals that the number of poor households in Lindi District is far bigger than the share that the cash transfer programme covers. The one million households target set by the TASAF cash transfer programme was lower than the number of extremely poor households in Tanzania. The World Bank (2019) estimated that by 2018, 14 million people, equivalent to 3 million households, lived below the national poverty line. Leaving many poor households without coverage limits the effectiveness of the programme to the community.

Furthermore, the findings attested that the inclusion error was the result of implementation flaws. One of the factors was information distortion. The beneficiaries who died after the identification exercise were included in the programme and were not removed even after the CMCs were notified. The names of the deceased were still being mentioned during payment meetings. This explains why phantom beneficiaries were evident during auditing conducted by Chief Auditor General in 2017. Delays in removing the names of the deceased cast doubt on the fidelity of programme coordinators. The possibility that programme coordinators may

be taking advantage of the weakness of the system, affirms the claim that involving communities in targeting poor households runs the risk of elite capture.

Similarly, the unpredictability of the amount to be received was rated very low. Twenty-six per cent of the respondents either strongly agreed or agreed that the timing for receiving cash transfers is predictable. This implies it was difficult to predict when the money will be delivered to beneficiaries. Although it was expected the money should be paid within two months, in some cases it took a longer period than expected without notifying the recipients. Other government monetary priorities were accused of undermining the allocation of funds to the cash transfer programme. The unpredictability of income impedes household consumption (Ganong and Noel, 2019). For poor households, income volatility increases the odds of food insecurity.

Table 4: Overall household perception of the implementation of the CBT mechanism

Perceptions	Frequency	Per cent
Effective	414	45.5
Undecided	225	24.7
Not effective	271	29.8
Total	910	100%

Source: Data (2021)

Nonetheless, the overall score per person was calculated by using Principal Component Analysis (PCA) and the results are presented in Table 4. The minimum and maximum scores were 1 and 5 respectively. The researcher grouped 1-2 and labelled them as not effective, 3 undecided, while 4 and 5 were labelled as effective. Generally, the descriptive statistics in Table 4 show that 45.5 per cent of the respondents believed that the programme was effective in targeting poor households. Moreover, 24.7 per cent were undecided while 29.8 per cent rated the targeting mechanism as not effective.

4.2 Households factors influencing the community's perception of the CBT mechanism

The study determined household factors influencing the community's perception of the CBT mechanism. The results in Table 5 show that of the ten explanatory variables, which were tested, only two variables sex and TASAF participation status were statistically significant. The sex of the household head had a beta coefficient of -0.636 indicating a negative or inverse relationship and was statistically significant (p-value = 0.017). This implies that male respondents had more likelihood of having a negative perception of community-based targeting mechanisms than their female counterparts.

Table 5: Household factors influencing the community's perception of the implementation of the CBT mechanism

Variables	B	S.E	Wald	Sig.	Exp(B)
Marital	0.067	0.087	0.599	0.439	1.069
Sex	-0.626	0.262	5.737	0.017	0.535
Age	0.007	0.008	0.639	0.424	1.007
Years of schooling	0.028	0.038	0.546	0.460	1.029
Occupation	0.061	0.035	2.991	0.084	1.063
Household Size	0.066	0.071	0.845	0.358	1.068
TASAF Participation	0.992	0.227	19.117	0.000	2.697
Land size (Production)	0.068	0.067	1.031	0.310	0.934
Land size (Home)	0.169	0.140	1.462	0.227	1.184
Years lived in the village	0.004	0.004	1.060	0.303	1.004
Constant	-0.602	0.853	0.497	0.481	0.548

Source: Data (2021)

The study findings may have been influenced by the design and implementation strategies of the cash transfer programme. TASAF prioritised cash payments to women to address the power differences that exist within the community and the fact that women are considered more concerned about improving their family living standards than men (Kinyondo & Maghashi, 2020). Prioritisation of women increased their awareness and participation in the programme. Increased awareness and participation of women might have contributed to the positive perception of women about the programme targeting mechanism. This improves the chance for women to take advantage of the opportunities provided by participation in cash transfer programmes.

Moreover, the participation status beta coefficient was 0.992 and was statistically significant with a p-value < 0.001 indicating that beneficiary households were more positive about the CBT mechanism than non-beneficiary households. This finding is consistent with the finding in a study by Kurdi *et al.* (2018) who found that beneficiaries in Egypt were more likely to perceive the targeting mechanism as fair or very fair while non-beneficiaries in general, and specifically non-beneficiaries near the threshold tended to see less fairness in targeting mechanism. However, the results contradict the outcome by Adoga (2018) who found that beneficiaries in Kenya perceived the targeting mechanism to be biased and households in serious need was left out. Participants in Kenya assessed the fairness of the beneficiary

selection in relationship to their status in the programme and that of other poor households in the community. Although the difference in the perception of some targeting issues can be regarded as the outcome of community diversity, the difference in key targeting mechanisms may signify the existence of systematic bias in the selection mechanisms. To understand whether the difference in perception is the outcome of systematic bias resulting from the targeting mechanism, Mann-Whitney U test was employed to get more insights into the items of the targeting mechanism which contributed to this difference. Results of the Mann-Whitney U test are presented in Table 6. Items relating to the payment system could not be comparable because non-beneficiaries were less aware of it.

Table 6: The difference in perception of the CBT mechanism between the beneficiary and non-beneficiary households

Items	Participation	Mean rank	z-score	p-value
1. Awareness				
Eligibility criteria	BF	232.7	-3.447	0.000
	NF	160.0		
Identification steps	BF	198.0	-0.674	0.500
	NF	204.8		
Awareness village meeting	BF	223.7	-4.813	0.000
	NF	171.7		
2. Selection of beneficiaries				
CMC selection participation	BF	188.1	-2.667	0.08
	NF	217.7		
Village Meeting attendance	BF	217.1	-3.444	0.001
	NF	180.2		
Villagers' opinions on CBT	BF	197.4	-2.700	0.07
	NF	166.5		
3. Targeting outcome				
No exclusion error	BF	198.2	-0.592	0.55
	NF	204.7		
No inclusion error	BF	192.3	-1.771	0.077
	NF	121.3		

Source: Data (2021)

Note: BF=Beneficiary household, NF= Non-beneficiary household

The results in Table 6 indicate that there is a significant difference in understanding of eligibility criteria, awareness and attendance of village meetings. The mean ranking on awareness of eligibility criteria was 232.7 for beneficiary households and 160 for non-beneficiary households with a p-value <.001. This indicates that the majority of the respondents agreed that they were aware of eligibility criteria, however, when they were asked to state the criteria used, their responses were personalized based on their status in cash transfer programmes. Instead of stating the criteria, most of them emphasized that they were really poor and deserved to be participants, they referred to their struggle to make hands meet as the main reason for their selection. On the other hand, most of the non-beneficiary

households argued that they did not understand why they were not included. The feeling that some households were left out while they deserved to participate in the programme, may create social tension between the beneficiary and non-beneficiary households.

Beneficiary and non-beneficiary households' mean ranking on awareness of village meetings to discuss eligible households was 223.7 and 171.7 respectively with a p-value < .001. Furthermore, beneficiary households' mean ranking on the attendance of village meetings was 217.1 and 180.2 for non-beneficiary households (p-value =.001). Beneficiaries were more likely to be aware of village meetings discussing eligible households and attending. Their awareness and attendance might have been motivated by prior information from CMC that their names have been proposed for inclusion in the programme. This indicates that there was the possibility of selection bias during the implementation stage. The bias gives some households an advantage over others in the identification stages.

5.0 CONCLUSION AND POLICY IMPLICATIONS

The study concludes that community participation by itself does not guarantee the legitimacy of the programme in the community. The quality of the programme design and implementation strategies determines the extent of inclusion and exclusion errors. In general, the community-rated performance of the CBT mechanism is average. Villagers were aware of meetings conducted to discuss eligible households and attended them. However, concerns about inclusion and exclusion errors were evident. Exclusion error was the outcome of programme design and implementation strategies while inclusion error was the result of implementation flaws. The existence of inclusion and exclusion errors reduces the effectiveness of the programme and its impact on poverty reduction. Moreover, the low predictability of payday delays income consumption of poor households and increases the risk of food insecurity.

In addition, the study found that the programme design had a positive influence on women's perception of the cash transfer programme. This indicates that the programme achieved its objective of prioritizing women in participation in community activities. This instigates a decrease in outdated traditions and norms, which undermines the capacity of women in improving the household's welfare. Findings indicate that perceptions of cash transfer targeting differs among beneficiary and non-beneficiary households. The fact that beneficiaries were pre-informed by CMC that their names have been proposed for inclusion in the programme suggests the prevalence of systematic bias in selecting poor households.

The study confirms the theoretical underpinning that participation procedure including only those that are easily available is likely to result in a biased outcome.

The study provides valuable policy implications to the Tanzania Government as well as TASAF in efforts of improving the CBT mechanism. The central government and TASAF should design cash transfer programmes for the poor that include all eligible beneficiaries. This is in agreement with National Social Protection Framework, which recognizes universality as the key guiding principle. Moreover, the study suggests modification of the PSSN operational manual (URT, 2013) so that community actively participate in the selection and scrutinization process by removing the exclusion mandate from the hand of the CMC. In case of limited resources, the ranking of identified potential beneficiary households should be done in village meetings based on simplified procedures established by villagers themselves. It is worthwhile to establish a mechanism for verifying the existence of the beneficiary households every time the monies are disbursed. Programme coordinators should verify the list of recipients and their names should appear on the village notice board to enhance public accountability.

6.0 LIMITATIONS AND AREAS FOR FURTHER RESEARCH

This study's limitation included the lack of data on PMT, which assign scores to all beneficiary households and those who were considered for participation in the cash transfer programme. PMT is conducted by TASAF to rank the proposed cash transfer recipients by reviewing their social-economic status. Comparing the PMT results with the villagers' recommendations might be accomplished with the help of these data. This could have added quantitative information on the roots of inclusion and exclusion errors. In this study, the existence of inclusion and exclusion errors was determined qualitatively. Despite the numerous impact assessments of cash transfer programs, there is little concrete information on their cost-effectiveness, particularly concerning the CBT mechanism. There are significant discrepancies in the costs that are included in calculations, uncertainty surrounding the benefits' value, and a range of programme aims and approaches. Therefore, this area calls for further research.

REFERENCES

- Arnstein, S. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*. 35 (4), 216–224.
- Bah, A., Bazzi, S., Sumarto, S., & Tobias, J. (2018) Finding the Poor vs. Measuring Their Poverty: Exploring the Drivers of Targeting Effectiveness in Indonesia. *The World Bank Economic Review*. 0(0):1–25. doi:10.1093/wber/lhx020.
- Benasius, A.G. (2017). Stakeholders' perception on cash transfer programme as a strategy for poverty reduction in Tanzania. MSc-HRM Dissertation, Mzumbe University: Tanzania, 84pp.
- Bartlett, M. S. (1950). Tests of significance in factor analysis. *British Journal of Psychology, Statistical Section*, 8, 77-85.
- Briggs (2018). Poor targeting: A gridded spatial analysis of the degree to which aid reaches the poor in Africa. *World development*. 103(2018). 133-148. DOI <https://doi.org/10.1016/j.worlddev.2017.10.020>
- Brown, C., Ravallion, M., & Van de Walle, D. (2017). Are Poor Individuals Mainly Found in Poor Households? Evidence Using Nutrition Data for Africa. *World Bank Working Paper 8001. Washington*. 53 pp.
- Christopher, S. M. (2020). Ladder of citizen participation: Insights into female student representatives on public university councils in Uganda. *International Journal of Educational Administration and Policy Studies*, 12(2), 121-132.
- Cochran, W. G. (1963). *Sampling Techniques (2nd Ed.)* John Wiley and Sons, Inc. New York. 60 pp.
- Comrey, A. L., & Lee, H. B. (1992). Interpretation and application of factor analytic results. *Comrey AL, Lee HB. A first course in factor analysis*, 2, 1992.
- Conning, J., & Kevane, M. (2002). Community-based targeting mechanisms for social safety nets: A critical review. *World Development*, 30 (3): 375–394.
- Craig, R. K., A. S. Garmestani, C. R. Allen, C. A. Arnold, H. Birgé, D. A. DeCaro, A. K. Fremier, H. Gosnell, and E. Schlager. 2017. Balancing stability and flexibility in adaptive governance: an analysis of tools available in U.S. environmental law. *Ecology and Society*, 22(2):3. <https://doi.org/10.5751/ES-08983-220203>
- Devereux, S., Masset, E., Sebates-Wheeler, R. Samson, M., Rivas, A., and Lintelo., D. (2015). Evaluating the Targeting Effectiveness of Social Transfers: A Literature Review. *IDS Working paper*. 460(12): 2-65.
- DFID (2011). *Cash transfers: Evidence paper policy division*. Retrieved from

- https://www.who.int/alliance-hpsr/alliancehpsr_dfidevidencepaper.pdf
- Dou, Y. (2016). The Impacts of Cash Transfer Programmes on Rural Livelihoods: a Study of Caboclos in the Brazilian Amazon Estuary Region. A thesis for Award of PhD Degree at the University of Waterloo, Canada.
- Ellis, F., and Manda, E. (2014). Seasonal Food Crises and Policy Responses: A Narrative Account of Three Food Security Crises in Malawi. *World Development*. 40(7):1407-1417.
- Evans, D.K., Hausladen, S., Kosec, K., & Reese, N. (2014). *Evaluation report on Community based conditional cash transfers in Tanzania*, World Bank. Washington D.C.
- Ganong, P., & Noel, P. (2019). Consumer spending during unemployment: Positive and normative implications. *NBER working papers 2541*. National Bureau of Economic Research, Inc.
- George, C., & Ulriksen, M. S. (2021). Social Protection in Tanzania: Challenges in the shift of financing PSSN from external funding to the government. Retrieved from <https://www.africaportal.org/publications/social-protection-tanzania-challenges-shift-financing-pssn-external-funding-government/> on 29/06/2022.
- Gliem, J., and Gliem, R. (2003). Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-type scales. *Research to Practice Conference*. 2003. Midwest. U.S.A. 82-88pp.
- Handa, S., Huang, C., Hypher, N., Teixeira, C., Soares, F., and Davis, B. (2014). Targeting effectiveness of social cash transfer programmes in three African countries. *Journal of Development Effectiveness*, 4(1).78-108.
- Harpe, S.E (2015). How to analyze Likert and other rating scales. *Currents in Pharmacy Teaching and Learning*. 7 (2015). 836-850. DOI: org/10.1016/j.cptl.2015.08.001
- ILO, (2015). *GED working paper 4/15*. Cash transfer programmes, poverty reduction and empowerment of women in South Africa, International Labour Office, Geneva.
- Jimu, M., and Msilimba, G. (2019). Targeting Practices and Biases in Social Cash Transfers: Experiences in Rural Malawi. *Africa Development*. 43(2): 65-84.
- Kakwani, N., Li, S., Wang, X., & Zhu, N. (2018). Evaluating the effectiveness of the rural minimum living standard guarantee (Dibao) programme in China. *China economic review*. Chieco (18). doi:10.1016/j.chieco.2018.07.010.
- Kamagi, D. (2020. December 18). JPM furious about project mismanagement. *Daily News*.

- Karlan, D., & Thuysbaert, B. (2016). Targeting Ultra-poor Households in Honduras and Peru. *The World Bank Economic Review*. 0(0):1-38. DOI: 10.1093/wber/lhw036.
- Kidd, S., Gelders, B., and Athias, D. (2017). Exclusion by design: An assessment of the effectiveness of the proxy means test poverty targeting mechanism. *ESS – Working Paper*. (56). Geneva, Switzerland.
- Kinemo, S. (2018). Knowledge and Interest: Exploring Households' Participation in School-based TASAF Development Projects in Morogoro Rural District. *Journal of policy and leadership*. 7(1).
- Kinyondo, A., & Magashi, J. (2020). Women's employment status and domestic violence in Tanzania: How do they link? *International Journal of Social Welfare*. 30 (2): 216-225. DOI: <https://doi.org/10.1002/pop4.256>
- Krishnan, V. (n.d.). *Constructing an Area-based Socioeconomic Index: A Principal Components Analysis Approach*.
- Liu, P., Yang, R., & Xu, Z. (2018). Public Acceptance of Fully Automated Driving: Effects of Social Trust and Risk/Benefit Perceptions. *Risk analysis International Journal*. (0)0:1-16. DOI: [org/10.1111/risa.13143](https://doi.org/10.1111/risa.13143).
- MacAuslan, I., & Riemenschneider, N. (2014m). Richer but Resented: What do Cash Transfers do to Social Relations? *IDS Bulletin*. 42(6): 60–66. doi:10.1111/j. 1759-5436.2011.00274.x
- Mak, B.K.L.; Cheung, L.T.O.; and Hui, D.L.H (2017). Community Participation in the Decision-Making Process for Sustainable Tourism Development in Rural Areas of Hong Kong, China. *Sustainability*. 9(1695): <https://doi.org/10.3390/su9101695>
- Mbago, G. (2016, December 7). TASAF officials suspended over budding grants scandal. *The Guardian*.
- McEvoy, R., Tierney, E. & MacFarlane, A. (2019). 'Participation is integral': understanding the levers and barriers to the implementation of community participation in primary healthcare: a qualitative study using normalization process theory. 19 (515): <https://doi.org/10.1186/s12913-019-4331-7>
- Mercer, K.L.; Perales, H.R.; & Wainwright, J.D. (2012). Climate change and the transgenic adaptation strategy: Smallholder livelihoods, climate justice, and maize landraces in Mexico - *Global Environmental Change* 22. 495-504.
- Mohamed, N. K., & Hamad, A. U. (2022). Implementation of Livelihood Enhancement Through Saving Component in South District Unguja. *Research & Development*, 3(2), 73-78.

- Molyneux, M., Nicola, J., & Samuels, F (2016). Can Cash Transfer Programmes Have 'Transformative' Effects? *The Journal of Development Studies*. 52 (8): 1087-1098. DOI: doi.org/10.1080/00220388.2015.1134781
- Mzingula, P. and Medeye, G. (2020). Livelihood Impacts and Sustainability of Livestock Farming Among Targeted Households of TASAF III in Kilole Village Lushoto District, Tanzania. *International Journal of Arts, Humanities, Literature and Science*. 4(9):13-22
- Nawi, F., Tambi, A., Samat, M., and Mustapha, W. (2020). A review on the internal consistency of a scale: the empirical example of the influence of human capital investment on Malcolm Baldrige quality principles in TVET institutions. *Asian people journal*. 3(1). 19-29. DOI: <https://doi.org/10.37231/apj.2020.3.1.121>.
- Ndlovu, T. & Ndlovu, S., 2019, 'Are cash transfers the panacea to local involvement in humanitarian decision making? Evidence from World Vision projects in Umzingwane', *Jambá: Journal of Disaster Risk Studies* 11(1), a486. <https://doi.org/10.4102/jamba.v11i1.486>
- Nicola Hypher & Fabio Veras Soares, 2016. Does Community-Based Targeting Really Work in Cash Transfer Programmes in Africa? *International Policy Centre for Inclusive Growth*. UNDP, Brazil.
- Nnsah, B. (2018). Assessing the performance of targeting mechanisms. *Society for the study of economic inequality*. Working paper series. Cameroon. 39pp.
- Nouvet, E., Abu-Sada, C., Laat, S., Wang, C., & Schwartz, L. (2016). Opportunities, limits and challenges of perceptions studies for humanitarian contexts. *Canadian Journal of Development Studies*. DOI: [10.1080/02255189.2015.1120659](https://doi.org/10.1080/02255189.2015.1120659)
- Nyamongo, C.K. (2012). Elites' attitudes toward the poor and pro-poor policies in Malawi. Thesis for Award of PhD Degree at the University of Birmingham: England, 369pp.
- Platteau, J. Somville, V. & Wahhaj, Z. (2014). Elite capture through information distortion: A theoretical essay. *Journal of Development economics*. 106: 205-263. doi.org/10.1016/j.jdeveco.2013.10.002
- Premand, P., and Schnitzer, P. (2018). Efficiency, legitimacy and impacts of targeting mechanisms evidence from an experiment in Niger. *Policy Research Working Paper 8412*. World Bank
- Prencipe, L., Houweling, T. A., van Lenthe, F. J., & Palermo, T. (2021). Do conditional cash transfers improve mental health? Evidence from Tanzania's governmental social protection program. *Journal of Adolescent Health*, 69(5), 797-805.

- Quick, J. & Byson, J. (2016). Theories of public participation in governance. [http://stratas.cl/wp-content/uploads/2016/09/Theories-of-Public-Participation.pdf]. site visited on 20/04/2020.
- Reshmi, B., Nair, S., and Unnikrishnan, B. (2017). Determinants Perception and Experiences of Beneficiaries of a Hospital-based Community Health Insurance in Coastal Karnataka in India. *Journal of health management*. 19(2).1-11.
- Schlozman, K., Jones, P., You, H., Burch, T., Verba, S., & Brady, H. (2015). Organizations and the Democratic Representation of Interests: What Does It Mean When Those Organizations Have No Members? *Perspectives on Politics*. 13(4). 1017-1029. Retrieved from <http://www.jstor.org/stable/43866811>.
- Seleka, T., & Lekobane, K (2014). Public Transfers and Subsistence Producer Disincentives in Botswana. *IDPA Working Paper No 37*. Retrieved from <https://dx.doi.org/10.2139/ssrn.2819994>
- Setia M. S. (2016). Mechanismology Series Module 3: Cross-sectional Studies. *Indian journal of dermatology*, 61(3), 261–264. <https://doi.org/10.4103/0019-5154.182410>
- Smętkowski, M., Gorzelak, G., Rok, J. (2018). Stakeholders' perception of Cohesion Policy implementation and performance: dimensions, determinants and outcomes. *Cohesion research paper 10*. [http://www.cohesify.eu/wp-content/uploads/2018/04/cohesify-research-paper-10.pdf] site visited on 18/03/2021.
- Stoeffler, Q., Mills., B and Ninno, C., P (2015). Reaching the poor: Cash transfer programme targeting in Cameroon. *Agricultural & Applied Economics Association and Western Agricultural Economics Association Annual Meeting*, 26-28 July 2015. San Fransisco, U.S.A. 53 pp.
- Tallberg, J., & Zürn, M. The legitimacy and legitimation of international organizations: introduction and framework. *Rev IntOrgan*. **14**. 581–606 (2019). DOI: [org/10.1007/s11558-018-9330-7](https://doi.org/10.1007/s11558-018-9330-7).
- Tanyanyiwa, V. (2015). Decentralisation as a Rural Development Strategy in Zimbabwe: *Good Policy but Bad Practise*. 13 (2),:598-606
- UNICEF, (2020). *Round 3 Report. A Cash Plus Model for Safe Transitions to a Healthy and Productive Adulthood*. UNICEF Office of Research – Innocenti: Florence.
- URT (2013). *Productive Safety Nets: Operational Manual. Tanzania Third Social Action Fund*. Vice Presidents Office. Government Printers, Dar es Salaam, Tanzania.
- URT (2018). *Tanzania Social Action Fund Fourth Quarter Progress Report April – June*, Dar es Salaam, Tanzania.

- Van Ast, J. and Gerrits, L. (2017). Public participation, experts and expert knowledge in water management in the Netherlands. *Water Policy*. 19 (1): 115–127. DOI: [org/10.2166/wp.2016.253](https://doi.org/10.2166/wp.2016.253)
- Verme, P., &Gigliarano, C. (2018). Optimal targeting under budget constraints in a humanitarian context. *World development*. DOI:[org/10.1016/j.worlddev.2017.12.012](https://doi.org/10.1016/j.worlddev.2017.12.012)
- White, H. (2017). Effective targeting of social programmes: an overview of issues, *Journal of Development Effectiveness*. 9 (2): 145-161. DOI: [10.1080/19439342.2017.1317282](https://doi.org/10.1080/19439342.2017.1317282)
- World Bank (2018). *Executive summary*. Tanzania Mainland Poverty Assessment. Washington. 60pp.
- Wossen, T., &Berger, T. (2015). Climate variability, food security and poverty: Agent-based assessment of policy options for farm households in Northern Ghana. *Environmental Science Policy*.47, 95–107. doi:[10.1016/j.envsci.2014.11](https://doi.org/10.1016/j.envsci.2014.11).
- Xun Li, Fan Zhang, Eddie Chi-man Hui, Wei Lang (2020). Collaborative workshop and community participation: A new approach to urban regeneration in China. *Habitat international*. 102, 102107. <https://doi.org/10.1016/j.cities.2020.102743>.

Appendix I

Taro Yamane's (1963) formula of the finite population is detailed below:

$$n = \frac{N}{1 + N * (e)^2} = \frac{99559}{1 + 99559 * (0.05)^2} = 398 \text{ households}$$

Where *n* is the sample size, N is the number of households in Lindi district as per NBS (2019), *and e* is the level of precision which was 0.05.