

**SPATIAL DIVERSITY OF HOUSEHOLDS' PARTICIPATION IN POVERTY
REDUCTION PROGRAMMES IN TANZANIA: A CASE OF TANZANIA
SOCIAL ACTION FUND (TASAF)**

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**A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR
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ABSTRACT

Most development policies emphasize on households' participation in poverty reduction programmes to achieve poverty reduction outcomes. However, many studies argue that most of the participatory programmes adopted in Tanzania are ineffective. One of the major reasons for ineffectiveness is spatial diversity of households' participation in poverty reduction programmes. Unfortunately, none of such studies have identified the level and factors and effects of spatial diversity of household participation in poverty reduction programmes. With this regard the study aimed to: identify levels of spatial diversity on households' participation, examine the variation in spatial diversity of household participation in poverty reduction programmes, identify factors influencing spatial diversity of household participation and analyze influence of spatial diversity of households' participation in poverty reduction. The study involved a sample of 480 households from three districts namely: Rungwe, Mvomero and Bahi. Descriptive and inferential data analysis techniques were applied. The findings revealed that districts have significant variations in terms of socio-economic, such as: income, education, household size, services factors such as access to food, access to water, access to health services and access to education and physical factors such as agglomeration cost advantage, land resource, pasture, climate, distance to project area have showed a significant variation. On the other hand very few aspects or socio-economic factors namely: income and education, service factors such as: access to food, access to water, and access to health services and physical factors such as land resource, pasture and distance to project area were found to have a significant influence on households' participation in poverty reduction programmes. Also the study findings revealed that households' participation in poverty reduction programmes has significant influence on poverty reduction. Based on the findings number of policy measures and actions were recommended. These include: the need to change participatory system¹ that accommodates vulnerable people who

cannot afford to contribute cash, material and labour. It is recommended that poverty reduction programmes must design integrated participatory strategies able to accommodate spatial differences in terms of socio-economic, service and physical factors. The study recommends that socio-economic, service and physical factors should be taken into consideration when designing and implementing poverty reduction programmes.

DECLARATION

I, **Andrew Marcelin Beatus Komba**, do hereby declare to the Senate of Sokoine University of Agriculture, that this thesis is my original work done within years 2011-2015 and that it has neither been submitted nor being concurrently submitted for degree award in any other institution.

Andrew Marcelin Beatus Komba
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Date

The above declaration is confirmed by

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(Supervisor)

Date

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DEDICATION

Dedicated to my wife Rehema, son Brian and daughters Britney and Briell.

TABLE OF CONTENTS

ABSTRACT	ii
DECLARATION	iv
COPYRIGHT	v
ACKNOWLEDGEMENTS	vi
DEDICATION	viii
TABLE OF CONTENTS	ix
LIST OF TABLES	xvi
LIST OF FIGURES	xviii
LIST OF APPENDICES	xix
LIST OF ABBREVIATIONS	xx
CHAPTER ONE	1
1.0 INTRODUCTION	1
1.1 Background Information	1
1.2 Problem Statement and Justification for the Study.....	4
1.3 Objectives of the Study	5
1.4 Specific Objectives	5
1.5 Research Question and Hypotheses	6
1.5.1 Research question:.....	6
1.5.2 Null hypothesis 1	6
1.5.3 Null hypothesis 2	6
1.5.4 Null hypothesis 3	9
1.6 Conceptualization of key Terms and Concepts	9

CHAPTER TWO	13
2.0 LITERATURE REVIEW	13
2.1 Spatial diversity of households' participation in poverty reduction programmes	13
2.2.2 Experience of participation in Tanzania.....	17
2.2.2.1 Participation during post independence period (1961-1967)	17
2.2.2.2 Spatial diversity of participation during socialism and self reliance period	19
2.2.2.3 Spatial diversity of participation during economic reforms period.....	20
2.2.2.4 Spatial diversity in participation during period of poverty reduction strategies.....	22
2.3 Empirical Review of Spatial Diversity of Households' Participation in Poverty Reduction programmes	23
2.3.1 Spatial Diversity of Participation in Poverty reduction Programmes	24
2.3.2 Household Participation in Tanzania Social Action Fund (TASAF) programme.....	25
2.3.2.1 The role of TASAF.....	26
2.3.3.2 Participatory framework used by TASAF	27
2.3.3.3 Applicability of TASAF participatory approach.....	28
2.3.3.4 Achievements of TASAF	29
2.3.3 Challenges of TASAF	29
2.3.4 Methodologies for assessing spatial diversity in participation and poverty reduction programmes.....	30
2.3.4.1 Measuring spatial diversity	32

2.4.	Theoretical Framework for Spatial Diversity of Household Participation in Poverty reduction programmes.....	35
2.5	Research Gap	36
2.6	Conceptual Framework.....	37
2.7	Summary of the Chapter	38
CHAPTER THREE		41
3.0	METHODOLOGY	41
3.1	Selection of Study Areas.....	41
3.1.1	Bahi District profile.....	42
3.1.2	Mvomero District profile.....	43
3.1.3	Rungwe District profile	45
3.2	Research Design	46
3.3	Sampling Procedure and Sample Size	46
3.3.1	Sampling Procedure	46
3.3.2	Sample unit and sampling of respondents	47
3.3.3	Sample size.....	48
3.4	Data Sources	49
3.4.1	Primary data sources	49
3.4.2	Secondary data sources	49
3.5	Methods of Data Collection.....	49
3.5.1	Focus Group Discussion and Key Informants’ Interviews for Qualitative Data.....	50
3.5.2	Observation technique.....	51
3.5.3	Survey Questionnaires.....	51
3.5.4	Secondary data collection.....	51

3.6	Data Processing.....	52
3.7	Data Analysis.....	52
3.7.1	Validity and Reliability of Instruments.....	52
3.7.1.1	Validity.....	52
3.7.1.2	Reliability.....	53
3.7.2	Descriptive analysis.....	53
3.7.2.1	Socio-economic characteristics of respondents.....	53
3.7.2.2	Objective one.....	54
3.7.3	Inferential analysis.....	54
3.7.3.1	Objective two.....	54
3.7.3.2	Objective three.....	56
3.7.3.3	Objective four.....	58
3.8	Ethical Consideration.....	58
CHAPTER FOUR.....		60
4.0	RESULTS AND DISCUSSION.....	60
4.1	Socio-economic Characteristics of Respondents in the Study Area.....	60
4.1.1	Distribution of respondents by gender and districts.....	60
4.1.2	Distribution of respondents by age and districts.....	61
4.1.3	Distribution of respondents by marital and districts.....	62
4.1.4	Distribution of respondents by education and district.....	63
4.1.5	Distribution of respondents by income and district.....	64
4.1.6	Distribution of respondents by household size and districts.....	65
4.1.7	Distribution respondents by main occupation and district.....	66
4.1.8	Distribution of respondents bythe location of the household and districts.....	67

4.2	Validity and Reliability of Instruments	68
4.2.1	Validity of the scale of measurements	68
4.2.2	Reliability of the scale of measurements.....	68
4.3	Levels of spatial diversity of households' participation in poverty reduction programmes in the study area.	69
4.4	Spatial diversity of Household Participation in Poverty reduction programmes in the Study Area	70
4.4.1	Spatial diversity of households' participation in poverty reduction programmes by villages.....	71
4.4.1.1	Diversity of villages of the same district in households' participation in poverty reduction programmes	72
4.4.1.2	Diversity households' participation in poverty reduction programmes by villages of different districts.....	73
4.4.2	Diversity households' participation in poverty reduction programmes by districts	74
4.5	Factors Influencing Spatial Diversity with regards to Household Participation in Poverty reduction programmes	76
4.5.1	Socio-economic factors influencing spatial diversity of households' participation in poverty reduction programmes	77
4.5.1.1	Variation of socio-economic factors across districts.....	78
4.5.2	Services factors influencing spatial diversity of households' participation in poverty reduction programmes	82
4.5.2.1	Variation of service factors across districts.....	84
4.5.3	Physical factors influencing spatial diversity of households' participation in poverty reduction programmes	89
4.5.3.1	Variation of physical factors across districts.....	90

4.5.4	Factors influencing spatial diversity of household participation in poverty reduction programmes.....	95
4.5.4.1	Socio-economic factors influencing spatial diversity of household participation in poverty reduction programmes.	96
4.5.4.2	Service factors influencing spatial diversity of household participation in poverty reduction programmes	97
4.5.4.3	Physical factors in influencing spatial diversity of household participation in poverty reduction programmes.	98
4.6	Influence of spatial diversity of household participation in poverty reduction	100
4.6.1	Influence of participation on poverty reduction among participating and non participation households	100
4.6.2	Influence of participation on poverty reduction among participating households	101
4.7	The link between Theory and the Study Findings	102
4.8	Contribution of the Study	103
4.9	The Summary of Chapter.....	104
CHAPTER FIVE		106
5.0 CONCLUSIONS AND RECOMMENDATIONS		106
5.1	Conclusions	106
5.1.1	Levels of spatial diversity on households' participation in poverty reduction programmes	106
5.1.2	Variation in spatial diversity of household participation in poverty reduction programmes in the study area.....	107
5.2.3	Factors influencing spatial diversity on households' participation in poverty reduction programmes.....	108

5.1.4	Influence of spatial diversity of household participation on poverty reduction.....	110
5.3	Recommendations.....	111
	REFERENCES	114
	APPENDICES	129

LIST OF TABLES

Table 1: Respondents and key informants from selected districts	48
Table 2: Participation levels in TASAF projects.....	56
Table 3: Distribution of respondents by gender and districts.....	61
Table 4: Distribution of respondents by age and district.....	62
Table 5: Distribution of respondents by marital status and district.....	63
Table 6: Distribution of respondents by education and district.....	63
Table 7: Distribution of respondents by income and districts.....	64
Table 8: Distribution of household size of respondents by districts.....	65
Table 9: Distribution of main occupation of respondents by districts.....	66
Table 10: Distribution of respondents by location of household and districts	67
Table 11: ANOVA with Friedman's Test of validity of data	68
Table 12: Cronbach Alpha test of Reliability of scales of measurement.	69
Table 13: ANOVA of households' participation in poverty reduction programmes by villages of the same districts	72
Table 14: ANOVA of households' participation in poverty reduction programmes by villages from different districts	74
Table 15: ANOVA of households' participation in poverty reduction programmes by districts	75
Table 16: Post Hoc analysis of district spatial diversity of household participation.....	76
Table 17: ANOVA of socio-economic factors across districts	80
Table 18: Post Hoc test of variation of socio-economic factors across districts	82
Table 19: ANOVA of Service factors across districts.....	85
Table 20: Post Hoc test of variation of service factors across districts	89
Table 21: ANOVA test of spatial factors across districts.....	91

Table 22: Post Hoc Test of variation of spatial factors across districts.....	95
Table 23: Linear regression analysis of factors influencing households' participation diversity	99
Table 24: Linear regression analysis of the influence of participation on income poverty reduction.....	101
Table 25: Linear regression of influence of households' participation on poverty reduction among participating respondents.....	102

LIST OF FIGURES

Figure 1: Conceptual Framework of Spatial Diversity of Households
participation in Development Program..... 39

Figure 2: Map of Bahi District with Vegetation and Land forms. 42

Figure 3: Map of Mvomero District with Vegetation and Land forms. 44

Figure 4: Map of Rungwe District with Vegetation and Land forms..... 45

Figure 5: Levels of households’ participation in poverty reduction programmes. 70

LIST OF APPENDICES

Appendix 1: Questionnaire to Head of Household	129
Appendix 2: Interviews Guide for Heads of Departments and Sections.....	139
Appendix 3: Questionnaire for District, Ward and Village Officials	140

LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
ASDP	Agriculture Support Development Programme
CBO	Community Based Organization
CDD	Community Driven Development
CDD	Community Driven Development
Dr	Doctor
ERP I	Economic Recovery Programme I
ERP II	Economic Recovery Programme II
HIPC	Highly Indebted Poor Countries
IDA	International development Association
IFAD	International Fund for Agriculture Development
ILO	International Labour Organization
IMF	International Monetary Fund
IRDPA	Institute of Rural Development Planning
LGAs	Local Government Authorities
LGCDG	Local Government Development Grant System
MDGs	Millennium Development Goals
MDGs	Million Development Goals
MKUKUTA	Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania
NESP	National Economic Survival Programme
NGOs	Non-Governmental Organizations
NPES	National Poverty Eradication Strategy
NSGRP	National Strategy for Growth and Reduction of Poverty
PADEP	Participatory Agriculture Development Programme
PRS	Poverty Reduction Strategy

SAPs	Structural Adjustment Programmes
SPSS	Statistical Package for Social Science
SUA	Sokoine University of Agriculture
TANU	Tanganyika African National Union
TASAF	Tanzania Social Action Fund
TASAF	Tanzania Social Action Fund
TZs	Tanzanian Shillings
UNESCO	United Nation Education and Scientific and Cultural Organization
UNICEF	United Nations Children and Education Fund
URT	United Republic of Tanzania
VCs	Village Councils
VEO	Village Executive Officer
VTTP	Village Travel and Transportation Programme
WEO	Ward Executive Officer

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

In many developing countries spatial diversity of households' participation in poverty reduction programmes is the main challenge towards poverty reduction (Silva, 2008). Practically, spatial diversity of households' participation refers to differences in the households' participation by geographical units (Elberei, 2007) which implies a difference in the level of household participation from villages to village, wards to ward, districts to district or region to region (Kim, 2005). According to Taylor *et al.* (2008) confirmed that spatial diversity in households' participation in poverty reduction programmes is common in many developing countries. However, many poverty reduction policies and poverty reduction programmes in developing countries failed to recognize this fact when formed to address poverty challenges.

Tanzania is one of the countries which use the participation approach as a tool for tackling poverty. The participation approach has been observed in many development strategies adopted in Tanzania. After Tanganyika's independence (1961), the growth strategy was adopted. The growth strategy was a macro-economic policy towards economic management which demanded all people to participate in nation building. The growth strategy contributed to the growth of Tanganyika's economy. Between, 1961-1963 the economy grew from 2.9% to 4.1% but later failed to sustain due to low participation of people at the local level (Msambichaka and Naho, 1984). In 1964, Tanganyika united with Zanzibar and formed United Republic of Tanzania. Thereafter in 1967, Tanzania adopted African socialism and self-reliance policy (Ujamaa na Kujitegemea). This stimulated popular participation through villagilization, small scale industry and agriculture

intensification strategies. During the first five years (1967-1972) of the Arusha Declaration the economy grew at 6.2% (Mtatifikolo and Mabele, 1999). In 1972 the government adopted the decentralization policy which aimed at increasing decentralization of power to the local people. However, the decentralization was reported to fail due to improper mechanisms of decentralization, low people's participation in poverty reduction programmes, various economic problems such as the oil crisis of 1973, the Kagera War between 1978 and 1979 and drought in 1974 which all altogether led to the decline of economic growth in the early 1980s (Bagachwa, 1994).

In the early 1980s, Tanzania adopted Economic Recovery Programmes I and II (ERPs). The ERP I was implemented between years 1983-1986 and ERP II between years 1986-1989. ERPs I and II were local economic survival programmes made in response to economic crisis which ensured local people's participation. Given the fact that the country was in high economic hardships both ERP I and II failed even before their maturity (Wangwe, 2009).

Due to the decline of Tanzania's economy in the mid 1980s, Tanzania started implementation of the World Bank and IMF's based Structural Adjustment Programmes (SAPs). The motive behind the SAPs was to revive the economy through various measures among others; privatization of public enterprises, cost sharing, public service reforms, financial sector reforms, commercialization and trade liberalization. It has been argued that SAPs revitalized economic growth. However, critics argue that it hindered people's participation in social and economic activities (Mtatifikolo, 1994). In order to revive economic development and achieve a broadly defined poverty reduction, Tanzania adopted a series of poverty reduction strategies under the name of National Poverty Eradication Strategy (NPES) in 1998, Poverty Reduction Strategy (PRS) of 2000-2003

and National Strategy for Growth and Reduction of Poverty (NSGRP) I and II in 2005-2010 and 2010-2015 respectively. These strategies emphasized the use of participatory approaches in engaging poor households in poverty reduction programmes (URT, 2010a).

Within the current National Strategy for Growth and Reduction of Poverty (II) households' participation is a focal point. It is taken as a broad methodology for the management of poverty reduction programmes both at the macro and micro levels. This situation has stimulated economic growth between 4.1% and 6.7 % in the years 2001 and 2008, respectively (URT, 2010).

Practically, households' participation in poverty reduction programmes is realized in different programmes such as; Tanzania Social Action Fund 2000-2015, Participatory Agriculture Development Programme (PADEP) of 2004, Village Travel and Transport Programme (VTTP) of 2003, District Agricultural Support Programmes of 2004 and many others (URT, 2014). Similarly some United Nation Agencies and Non Governmental Organizations established development and poverty reduction programmes such as; Child Survival and Development Programme in 1990 by UNICEF, Participatory Irrigation Programme by International Fund for Agriculture Development (IFAD) and Village Poverty Reduction Programme in 2001 by World Vision (Elberei, 2007).

While, Tanzania is implementing various poverty reduction programmes to reduce rate of poverty, statistics show increased spatial differences on household poverty by 16 % between 2008 and (URT, 2008; 2012). This implies that spatial diversity of household poverty exists and its effects on poverty reduction initiatives are significant.

Despite the above mentioned there is inadequate evidence from empirical studies made to identify levels, factors and effects of spatial diversity of household participation in poverty reduction programmes in Tanzania. Therefore, this study intended to examine the spatial diversity of households' participation in development and their influence on poverty reduction.

1.2 Problem Statement and Justification for the Study

Many efforts towards poverty reduction view household participation in poverty reduction programmes as an essential ingredient to poverty reduction process. However, many efforts by governments, international development agencies, local organizations and non-governmental organizations have failed to achieve equality of levels households' participation in poverty reduction programmes among various spatial units (Mohammed, 2003).

Spatial diversity in households' participation in poverty reduction programmes is linked with spatial differences in poverty levels in many developing countries (Romanowski, 1998; Rigg, 2003). However, there is no empirical evidence to justify the extent and how spatial diversity of households' participation in poverty reduction programmes affects poverty reduction (Aikael, 2010; Simbila, 2011).

In order to address problems in respect of spatial diversity of households' participation in poverty reduction programmes, information related to; levels of participation, spatial diversity of households' participation, factors which influence spatial diversity of households' participation in poverty reduction programmes and effects of spatial diversity of household participation on poverty reduction have to be understood. To this end, this

study was conducted to examine spatial diversity of households' participation in poverty reduction programmes.

Information generated from this study provides important recommendations for policy development and design of poverty reduction programmes in Tanzania. This enable poverty reduction programmes to reduce spatial differences in households' participation in poverty reduction programmes that subsequently reduce poverty.

1.3 Objectives of the Study

The main objective of this study was to examine spatial diversity of households' participation in poverty reduction programmes in Tanzania.

1.4 Specific Objectives

Specific objectives of this study were to:

- (i) identify levels of spatial diversity on households' participation in poverty reduction programmes in the study area.
- (ii) examine the variation in spatial diversity of household participation in poverty reduction programmes in the study area.
- (iii) identify factors influencing spatial diversity of household participation in poverty reduction programmes in the study area.
- (iv) analyze influence of spatial diversity of household participation in poverty reduction.

1.5 Research Question and Hypotheses

This study was guided by one research question and three hypotheses. The research question was used to guide findings and discussion for objective 1, while hypotheses 1, 2 and 3 were used to guide findings and discussion of objectives 2, 3 and 4, respectively.

1.5.1 Research question:

Are there any spatial differences on levels of households' participation in poverty reduction among districts and villages?

1.5.2 Null hypothesis 1

General Hypothesis

There are equal levels of households' participation in poverty reduction programmes in the study area (districts/villages).

Specific hypotheses

- (i) H_0 = there are equal levels of households' participation in poverty reduction programmes in the study districts.
- (ii) H_0 = villages of the same district have equal levels of households' participation in poverty reduction programmes.
- (iii) H_0 = villages of different districts have equal levels of households' participation in poverty reduction programmes.

1.5.3 Null hypothesis 2

General hypothesis

- (i) H_0 = there are no differences of socio-economic factors (x_1) in influencing spatial diversity of households' participation in poverty reduction programmes.

- (a) H_0 = there is no difference of education (x_1) in influencing spatial diversity of household participation in poverty reduction programmes.
 - (b) H_0 = there is no difference of income (x_2) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (c) H_0 = there is no difference of household size (x_3) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (d) H_0 = there are no differences of gender (x_4) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (e) H_0 = there is no difference of age (x_5) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (f) H_0 = there are no difference of marital status (x_6) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (g) H_0 = there is no difference of occupation (x_7) in influencing spatial diversity on households' participation in poverty reduction programmes.
 - (h) H_0 = there is no difference of location of household (x_8) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (ii) H_0 = there are no differences of service factors in influencing spatial diversity of households' participation in poverty reduction programmes.
- (a) H_0 = there is no difference of access to food (x_9) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (b) H_0 = there is no difference of access to water (x_{10}) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (c) H_0 = there is no difference of access to health services household size (x_{11}) in influencing spatial diversity of households' participation in poverty reduction programmes.

- (d) H_0 = there is no difference of access to primary education (x_{12}) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (e) H_0 = there are no difference of ownership of house (x_{13}) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (f) H_0 = there is no difference of ownership of bicycle (x_{14}) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (g) H_0 = there are no difference of ownership of cattle (x_{15}) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (h) H_0 = there is no difference of ownership of goats (x_{16}) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (iii) H_0 = there are no differences of physical factors in influencing spatial diversity of households' participation in poverty reduction programmes.
- (a) H_0 = there is no difference of agglomeration cost advantage (x_{17}) in influencing spatial diversity of households' participation in poverty reduction programmes
 - (b) H_0 = there is no difference of vegetation support to project products (x_{18}) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (c) H_0 = there is no difference of access to land (x_{19}) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (d) H_0 = there is no difference of climate (x_{20}) in influencing spatial diversity of households' participation in poverty reduction programmes.
 - (e) H_0 = there is no difference of distance to project area (x_{21}) in influencing spatial diversity of households' participation in poverty reduction programmes.

1.5.4 Null hypothesis 3

This null hypothesis (H_0) asserts that, spatial diversity of households' participation has no influence in poverty reduction.

1.6 Conceptualization of Key Terms and Concepts

This section provides definitions of key terms and concepts used under this study. The key concepts that have been used in this research study are; participation, spatial diversity and poverty reduction.

1.6.1 Participation:

Participation has many definitions. On the one side, some researchers take participation as a process of taking part and relate with others who reflect that process. It implies both action and correlation, which suggests an act for developing a relationship in achieving a goal. Participation is broader than mere engagement in practice it is continuous sharing of activities to reach a goal (Wenger, 2003). Other literature define participation as simply engaging with any particular activity on the other side, researchers define participation as a process through which people influence and share control over development initiatives. Supporters of the latter view have recommended different stages of people's participation process in local development programs. A metaphoric eight rung ladder of the participation process has been developed by Wenger (2003), which is: (1) Manipulation, (2) Therapy, (3) Informing, (4) Consultation, (5) Placation, (6) Partnership, (7) Delegated power and (8) Citizen control. In contrast, International Association for Public Participation (2007) proposed five stages of people's participation, which are: (1) inform: one way communication; (2) consult: two-way communication; (3) involve: deciding together; (4) collaborate: acting together; and (5) empower: supporting independent community interests. A detailed description of households' participation and its relation

with poverty reduction can be seen in the next chapter. Nevertheless this study adopted the participation process described by TASAF (2010). The TASAF participation process involves three major dimensions. These are cash, labour-time and material contributions.

1.6.2 Household

This study considers a household as a unit which consists of one or more people who live in the same dwelling and also share at meals or living accommodation, and may consist of a single family or some other grouping of people. A single dwelling will be considered to contain multiple households if either meals or living space are not shared.

1.6.3 Spatial Diversity:

Spatial diversity of households' participation refers to differences in the households' participation by geographical units (Elberei, 2007) which implies a difference in the level of household participation from villages to village, wards to ward, districts to district or region to region (Kim, 2005).

1.6.4 Poverty Reduction:

Poverty reduction refers to the promotion of economic growth that will permanently lift as many people as possible over a poverty line. Poverty reduction measures include rising of income to enable the poor to create wealth for themselves as a means to meet human necessities such as food, shelter, education, health services, water and other social requirement. Generally poverty reduction process entails many and different dimensions, but with respect to this study the scope of poverty reduction is limited at income poverty reduction.

1.6.5 Poverty Reduction Programmes

The content of the development plans indicate that poverty reduction has been in the national radar agenda throughout Tanzania's independence period. Immediately after independence in the year 1961 the government declared that poverty, illiteracy and diseases as great enemies of the country. To date state-led poverty reduction efforts have been pursued within the national development planning and implementation framework. Implementation of such programmes has mostly been under specific line ministries and government institutions, with the core mandate to fight poverty, including the Tanzania Social Action Fund (TASAF). Many of poverty reduction programmes in Tanzania targeted rural areas although there have also been attempts at tackling urban poverty especially in the slums of major towns and cities.

1.7 Summary of the Chapter and Structure of the Thesis

Without the spatial equality in household's participation, poverty reduction cannot be achieved and thus there are not effective outcomes from poverty reduction programmes. To comply with these conditions the government of Tanzania adopted various programmes to foster for households' participation in poverty reduction programmes. Unfortunate spatial diversity of households' participation in poverty reduction programme has remained a problem to be researched. Based on the above context this chapter has presented the background information, statement of the problem and justification of the study. It also presented objectives of the study, research question and hypotheses and provides the key concepts used in the thesis. The background information has set the understanding of why Tanzania has not been successful in reducing spatial inequality of poverty over the years. It also shows how spatial diversity of participation is linked with poverty reduction. Chapter 2 provides a theoretical understanding of the spatial diversity of participation, the participation debate that is at the centre of the analysis pursued in the

study. This is achieved through careful analysis of theoretical and empirical literature on Tanzania and other countries that speaks directly to the concepts of participation and poverty reduction. The chapter also provides the theoretical frameworks that underpin this study. Chapter 3 provides the methodology used to draw sample of respondents, collect data, analysis and presentation. Chapters 4 present empirical findings on districts diversity in terms of households' participation levels in poverty reduction, factors influencing household's participation and effects of participation on poverty reduction. This chapter forms the central nerve of the thesis. The narrative from the two areas enables us to understand how macro level policy issues translate at local level and the lessons we can learn for poverty reduction in rural Tanzania and similar contexts.

Chapter 5 summarizes and draws meanings from the findings that speak to wider spatial contexts beyond the three districts. It presents the conclusions and policy implications that emerge from this study. The chapter also highlights the conceptual and empirical contribution of this study to knowledge and efforts to enhance participation and reduce households' poverty.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1. Spatial Diversity of Households' Participation in Poverty Reduction Programmes

This chapter is made by four premises. Firstly, it provides a theoretical review of the existing literature on households' participation on poverty reduction programmes. Secondly, it provides an empirical review household's participation in poverty reduction programmes. Thirdly, it shows the literature gap on issues related to spatial diversity of household participation. Finally it establishes a theoretical and conceptual framework by which the factors for spatial diversity of household's participation in poverty reduction programmes may be identified.

2.2. Theoretical Review of Participation in Poverty Reduction Programmes

This part discussed the various literature works which have contributed in the understanding of the concept of participation in poverty reduction process. The discussion has directed at understanding the participation theory and the experience of participation process in Tanzania.

2.2.1 Review of the Participation Theory

Participation theory has attracted considerable attention among development economists (Barrett, 2007). Participatory theory originates from two ideologies: (i) the alternative development discourse and (ii) Paulo Friere philosophy of humanization through concretization (Bretty, 1996). Both ideas believe that households' participation in development and poverty reduction programmes is the basic factor for human development. Participation approach is adept in dealing with many problems that developing country of the world face today. It can be understood as a forum wherein

people can participate in the decision making process and are involved in the local affairs. According to Pandit (2006), participation is the creation of opportunities to enable all members of a community to actively contribute to and influence the development process and to share equitably the fruits of development. The following aspects indicate the scope of participation theory.

(i) Participation and Governance

In theory participation is part of governance as in certain ways is like revisiting the reasons of community life wherein the community as a whole is involved in promoting welfare. Governance needs people to be recognized as citizens and practice their right to establish their voice by participating directly in poverty reduction programmes (Cornwall, 2004; Khwaja, 2004).

Bardhan (2002) argue that, traditionally, the defining characteristic of participation and democracy is the right of people to elect the leaders of the government, who will then make the decisions and hold the bureaucracies accountable for implementing those decisions.

On the other hand, participation can be seen as a strategy of devolution of authority and power, resources, distribution of rights and duties from state to local level of governance, and from public to civil society (Cooke and Kothari, 2001). According to Prett (1995), participation refers to building of local capacity and self reliance, but also to justify the extension of control of the state, through devolvement of state power and decision making to community members who benefits from development interventions.

Petit (2012) describes the equity of participation in political institutions as the enhanced voice of the least vocal so that they engage in making the decisions that affect their lives and lives of others like them. It is the ability to speak about, as well as speak for, themselves, gaining a right to engage in political processes. Again, such changes also require changes in social and cultural attitudes about people political participation and leadership.

The 1980s and 1990s saw the concept of participation evolving from the capital formation to the human factor approach and widely expanding to include citizenship rights and democratic governance. Emphasis was now placed on self reliance and the capacity of local people to shape development together with those in “power” (Cornwall, 2002). The growing interest in the way citizens influenced and held governments and other development agencies accountable gradually shifted the concept of participation from the notion of users and choosers of external services to that of agents in the broader processes of governance (Cornwall and Gaventa, 2001).

(ii) Participation in Poverty Reduction Programmes

Community participation' in poverty reduction programmes is defined differently by different people according to their context. On the one extreme, 'participation' is perceived as the response of receiving services from a development programme. On the other extreme, it is viewed as the complete ownership of the programme by the 'community' (Thomas and Thomas, 2007). People's participation in poverty reduction programmes is not an end in itself; it is now considered as a means to get the highest benefit from poverty reduction programmes and services (Khwaja 2004). Households' participation in poverty reduction programmes considered as an empowering process whereby as people mobilize resources to address social and economic problems in a collective way (Elberei, 2007).

Furthermore, participation is regarded as a vehicle towards poverty reduction, whereas people engage in productive and social activities which promote their welfare (Pretty, 1995).

Mansuri and Rao (2003) noted that an examination of the literature on community participation in poverty reduction programmes, suggests it leads to development projects that are “more responsive to the needs of the poor and more responsive government and better delivery of public goods and services, better maintained community assets, and a more informed and involved citizenry”.

(iv) Participation and Reduced Spatial Diversity

As regards the spatial perspective, household participation is the central approach for achieving spatial equality and poverty reduction. Through participation, all spatial units are expected to have balanced levels of development. Therefore, local techniques, methods and rules are being applied to reflect demands of people in a specified local area (Alberto and Ferrala, 2000).

With participation, spatial units which have many people who participate in poverty reduction programmes have better chances of reducing their poverty compared to those not participating in poverty reduction programmes (Habermas, 1991; Bolton, 2005). Participation in development programmes builds capacity of those who participate by providing them with skills, financial assistance and materials (Prety, 2006). Therefore, for a particular area or district to attain development, it needs a competitive households' participation in poverty reduction programmes so as to achieve spatial balance with better off districts (Kim, 2005).

2.2.2 Experience of Participation in Tanzania

In Tanzania, evolution of participation in poverty reduction programmes can be divided into four distinct phases. All phases discussed here, took place after independence. The first phase was immediately after independence which took place between 1961 and 1967. The second phase was during the Arusha Declaration period between 1967 -1980, third phase was during the macro economic reforms period, between years 1980-1998 and the fourth phase was between the years 1998-2010 that commenced in 1998 when Tanzania adopted poverty reduction strategies.

2.2.2.1 Participation during Post Independence Period (1961-1967)

The first phase of households' participation in poverty reduction programmes is between years 1961-1967. This phase started from 1961 when Tanzania then Tanganyika gained her independence from the British Colonialist on 9th December, 1961. Tanganyika won independence under the guidance of the Nationalist Part- Tanganyika African National Union (TANU). One year later, Tanganyika became a one party state and a republic having an elected President. In 1964 Tanganyika and Zanzibar united and formed the United Republic of Tanzania (Omari, 1985). Cliffe (1972) and Iliffe (1971) noted that, Tanzania inherited a poor country at her independence whereby; in 1961 Tanzania was the poorest country among the Eastern Africa states. The colonial government left Tanganyika with high spatial diversity as many areas of the country were poor except those with plantations, mining and industries (Shivji, 1987).

Due to the above situation, Tanzania immediately after independence adopted her first vision to achieve independence goals. Every Tanzanian understood and accepted that independence goal was a basic human right to every one without spatial or human inequality. However, having attained independence, it was realized that not everybody

understood his or her consequent obligation. As a result the government came with a slogan that, “enjoying the fruits of independence implied hard work”. Hence, the post-independence catchword "Uhuru na Kazi" was adopted. The catchword intended to exalt the importance of hard work in realizing the development which was championed in the struggle for independence (URT, 2000). Under such a philosophy “Uhuru na Kazi”, the Government of Tanzania put a high priority on poverty alleviation. Together with ignorance and diseases, poverty was considered to be one of the three ‘enemies of development’. In respect to the vision, several development frameworks were adopted to one of the major growth strategy in 1962 with a large focus on agriculture intensification and industrialization (Mtatifikolo, 2001). Although the growth strategy was imposed from the top but it’s focus on agriculture and industrialization paved for establishment of villagilization programmes, import-substitution industries and a small scale industrial strategy of which at the end mobilized high participation of people in public works (Bagachwa, 1995).

During this period peoples’ participation in poverty reduction programmes was considered to be a prime means of addressing spatial inequalities and wining adequate local and human resource for production at the local level (Mtatifikolo, 2001). Community participation was later supported by the World Bank and ILO through the Basic Needs Strategy and Income Redistribution Strategy, respectively (Dutch Aid, 2004). These two strategies enhanced peoples’ engagement in productive activities using local resources and technologies.

During that period Tanzania managed to mobilize 76.2% of her labour force into productive activities using labour intensive technologies in both rural and urban sectors. Between 1961 and 1967 there was an average income growth of 2% per annum

(Rweyemamu, 2003). However, the country's poverty level remained high where as more than 75% of Tanzanians were under the poverty line of inability to acquire and spend USD 1per day (Msambichaka and Naho, 1985). The high level of poverty and weak economy, geared the Tanzania Government to revisit its vision and hence come with a second vision based on African socialism and self reliance.

2.2.2.2. Spatial Diversity of Participation during Socialism and Self reliance Period

In 1967, Tanzania adopted the second national Vision under the Arusha Declaration. The declaration articulated a philosophy of socio-economic liberation based on socialism and self-reliance as the long-term national goal of Tanzanians. The socialism philosophy put adequate emphasis on spatial equality and development. The Arusha Declaration was passed to enforce the socialism and self-reliance ideology. The declaration was accepted by the majority of Tanzanians and galvanized them behind its realization. Thus, since 1967, the development vision of Tanzania as well as policies for social and economic transformation have been guided by the principles and programmes enshrined in the Arusha Declaration (URT, 2000).

The socialism and self-reliance philosophy put more emphasis on use of local resource in both the agriculture and industrial sectors. In order to address spatial inequalities, peoples' participation in poverty reduction programmes was highly emphasized and utilized. This was followed by various campaigns like Ujamaa villages, labour camps and promotion of small industries in both rural and urban areas (URT, 2004). During the period 1967-1972, about 89.7% of countrymen were engaged in productive activities out of which 81.2 % was from agriculture based sectors and 18.8% was from non-agriculture activities (Malima and Mbilinyi, 1983). During the period 1967-1972, the rate of economic growth increased from 2% to 6.2%, (Mtatifikolo, 2001). However, in the following years 1973-

1980, Tanzania's economy experienced serious decline due to number of problems such as; the oil crisis in 1973, drought in 1974, failure of coffee price in the 1970s, the Kagera War in the years 1978-1979 and break down of the first East African Community in 1977. Due to these economic shocks and many others, the rate of economic growth fell from 6.2 % to 2% between the years 1973 and 1981 and unemployment also increased in this period (Bagachwa, 1995). As a result, by 1980's, Tanzania was the world's second poorest country in GDP per capita terms while manifestation of such problems were highly related to poor policies and structural weaknesses (Rweyemamu, 2003). It is from these economic hardships that Tanzania adopted the local based Economic Survival Programmes between 1983-1985 which were followed by the IMF stabilization and World Bank Structural Adjustment Programmes in 1986 (Wangwe, 2009). During socialism and self-reliant, spatial diversity of households' participation in poverty reduction programmes was high, however private sector involvement started to take a big shape in the economy (Mtatifikolo, 1996).

2.2.2.3 Spatial Diversity of Participation during Economic Reforms Period

By the mid-1980s, the government of Tanzania had realized that the past development policies and strategies were not adequately responding to the changing market and technological conditions in the regional and world economy and were also not adapting to changes in the domestic socio-economic conditions (Wangwe, 2009). Either household participation in economic activities was low and spatially different. In that response, at the beginning of mid-1986 to 1995, the Government of Tanzania adopted socio-economic reforms (SER) which were the first in a series of strategies implemented after the economic turmoil of the 1970s. The turmoil of 1970's explicitly incorporated the IMF Stabilization and World Bank Structural Adjustment Programmes. The adjustment programmes and reform aimed at restoring stabilization and economic growth in the

country (World Bank, 2001). In fact socio-economic reforms adopted in mid 1986-1995 were part of World Bank and IMF conditionality rather than local ideas of development. People were induced to participate in economic activities through number of measures such as; cost sharing in services such as education, water, health and many others.

In the period 1981-1985, Tanzania government launched two successive home-grown" stabilization programs: the two-year National Economic Survival Program (NESP) in 1981 followed by the three-year Structural Adjustment Program (SAP) in 1983. Generally, NESP and SAP measures aimed at restoring economic growth and sustaining it through increasing the output of food and cash crops. The methods employed included using appropriate incentives, increasing foreign exchange earnings and improving their utilization, increasing capacity utilization in industries, increasing industrial exports, reducing the import content of industrial production, and controlling government expenditure (World Bank, 2001). Neither NESP nor SAP of 1983-1985 managed to promote participation and economic growth in Tanzania (Rweyemamu, 2003).

After failure of home-made survival programmes, the IMF and World Bank intervened with Economic Recovery Programme (ERP I) adopted in 1986-1989 which concentrated on economic reforms. It was followed by Economic Recovery Programme II (ERP II) in 1989-1992, which concentrated on social reforms. The aims of these reforms were to; achieve sustainable growth in real income and output. It was suggested that better pricing of crops, improved product and input marketing, promoting employment under private sector, increase in government outlays for agriculture, privatization of inefficient investments, an increase in industrial capacity utilization by liberalizing raw material imports, a decrease in the balance of payments deficit through devaluation, export incentive schemes and foreign exchange liberalization, better control of the budget deficit

and money supply were thought to be the key ingredients necessary to achieve this goal (Mtatifikolo, 2001). However in early 1990s, criticisms grew over the impact of the adjustment programmes on the poor, the state capacity to implement reforms, lack of participation, lack of ownership of the reforms and the relationship between conditionality and sovereignty of the state in pursuing its national development objectives. As a result, people dropped out in economic activity by 21% and rural underemployment was even more serious (Mponzi and Twillage, 2002; Nkya, 2004).

As a matter of response to such challenges, the IMF and World Bank undertook a transformation in the reform agenda. Thus in the 1990s the reform programs became much wider and more intensive to cover all aspects of the economy including employment through business services and small scale enterprises development. Also social dimensions were incorporated into the reforms so as to achieve a broader socio-economic development (Rweyemamu, 2003).

2.2.2.4 Spatial Diversity in Participation during Period of Poverty Reduction Strategies

Due to massive poverty and spatial inequality in third world countries by 1998, UNICEF called a World Summit to discuss new dimensions of poverty in Copenhagen, Denmark. The summit came up with New Poverty Agenda that is inclusion of social aspects of poverty. In respect to Copenhagen Summit resolutions, the World Bank and IMF introduced Poverty Reduction Strategy Papers to all Highly Indebted Poor Countries (HIPC) to guide countries efforts towards poverty reduction (Semboja, 2007).

Tanzania as a member of the HIPC countries, adopted the World Bank and IMF directives of adopting poverty reduction strategies, In 1998 the National Poverty Eradication

Strategy (NPES) was developed and followed by the National Development Vision 2025. In 2000 Tanzania adopted the three years, Poverty Reduction Strategy as a medium strategy to implement national vision and NPES. In 2005 the National Strategy for Growth and Reduction of Poverty (NSGRP) I was adopted to carry over the poverty reduction initiatives in the country. The NSGRP I was informed by the aspirations of Tanzania's Development Vision (Vision 2025). It is also committed to the Millennium Development Goals (MDGs), which are internationally agreed targets for reducing poverty, hunger, diseases, illiteracy, environmental degradation and discrimination against women by 2015. In 2010 the NSGRP II was adopted. The NSGRP II is implemented under all social and economic sectors in the country. In respect of Development Vision 2025 and NSGRP (2010), the Government of Tanzania formulated various poverty reduction programmes such as TASAF, PADEP, ASDP and many other to promote household's participation in poverty reduction activities.

2.3 Empirical Review of Spatial Diversity of Households' Participation in Poverty Reduction Programmes

This part provides the review of various literatures which have discussed several aspects of spatial diversity of households' participation in poverty reduction programmes. It has discussed central concepts of spatial diversity and participation in the study, including poverty reduction, within the larger development and poverty debate. In this discussion links between spatial diversity in household participation and poverty reduction programmes have been highlighted and the study has indicated how to treat such issues. The literature has also described the TASAF's participation profile and practices. TASAF is one of poverty reduction programmes in Tanzania, albeit used as the case study of this study.

2.3.1 Spatial Diversity of Participation in Poverty Reduction Programmes

Understanding the spatial diversity of households' participation has become a key preoccupation in the development field. It has been over a decade since participation moved toward the mainstream in development debates and a strategy for achieving poverty reduction. Studies that explain individuals' decisions to trust other community members and to participate in social organizations are interesting not only for academics but also for policymakers. Such studies contribute to policy discussions by contributing to our understanding of the accumulation of social capital: By understanding the determinants of participation we might be able to design economic and social policies that promote economic growth and poverty reduction.

Ngungi *et al.* (2003) indicated some of the determinants associated with households' decision to participate in development projects. In his study three major factors were revealed to have association with households' participation in rural development projects. Such factors are household income, household size and marital status.

Lederman (2001) indicated that the main determinants of the probability of participation in Argentina are age and household income. The argument behind is that participation in Argentina is also associated with lower probabilities of migration among rural residents, since most migrants live in urban centers), unemployment rates, and the individual's trust itself.

Hoddinott (2000) examined the relationship between community participation and the efficacy of interventions designed to reduce poverty. In his study he developed a framework for understanding the ways in which community participation can affect the outcome of interventions designed to reduce poverty. He identified three actors,

financiers, providers and beneficiaries. These multiple actors may have divergent preferences that lead them to attach different weights to the multiple objectives found in most anti-poverty interventions.

Kwahja (2004) considers the impact of community participation on outcomes of development projects. He offers a theoretical framework for participation by using the property rights literature to model how participation in an activity, in addition to involving information exchange, also results in greater influence in the activity.

Despite the availability of literature on the importance of participation and the associating factors, a large gap still exists between the participation theory and empirical evidence and understanding of the factors which influence spatial diversity of household's participation in poverty reduction programmes.

2.3.2 Household Participation in Tanzania Social Action Fund (TASAF) Programme

The Tanzania Second Social Action Fund is the programme being implemented by the Government of the United Republic of Tanzania (URT) with financial support from the International Development Association (IDA) aims at empowering communities to access opportunities so that they can request, implement and monitor subprojects that contribute to improved livelihoods. Hence, the Fund's objective is directly linked to the indicator targets in the National Strategy for Growth and Reduction Poverty (NSGRP) or MKUKUTA that is anchored on the attainment of selected Millennium Development Goals (MDGs) targets (TASAF, 2008). The role, approach, achievements and challenges of TASAF are described in the subsequent sections.

2.3.2.1 The role of TASAF

The Tanzania Second Social Action Fund (TASAF I, II and III) was launched in 2001, 2005 and 2013 respectively. The TASAF I ended in 2005 followed by TASAF II between years 2005-2010 and later extended up to 2012. TASAF III is expected to commence by June 2013 (TASAF, 2012). TASAF is being implemented by the Government of the United Republic of Tanzania (URT) with financial support from the International Development Association (IDA). TASAF aims at reducing human poverty by empowering household to access opportunities so that they can request, implement and monitor subprojects that contribute to improved livelihoods. Hence, the Fund's objective is directly linked to the indicator targets in the National Strategy for Growth and Reduction Poverty (NSGRP) or MKUKUTA that is anchored on the attainment of selected Millennium Development Goals (MDGs) targets.

As it has noted that the current TASAF II succeeded TASAF I while the operational procedures for TASAF II were not so different from TASAF I but with additional procedures. There was an introduction to sub project interest forms which any interested community is required to fill as a first step to getting TASAF support, at the LGA level, the LGCDG access criteria applies when disbursing funds to LGAs. LGAs who have met LGCDG access criteria will receive resources where as non-LGCDG Councils, TASAF access criteria for Village Council (VCs) to channel resource to communities would apply, and introduction of a 'ring fenced' window where other partners could support communities through channeling their funds to TASAF.

TASAF II covers all 121 Local Government Authorities (LGAs) on Tanzania mainland and the two Islands of Unguja and Pemba. Its operations focus on the following three specific target groups of beneficiaries (TASAF, 2009).

- i. The service poor (SP) communities for which it aims to improve access and use basic social services;
- ii. The food insecure households through creation of employment opportunities so as to increase their cash income, skills and opportunities from working in financed public works subprojects; and
- iii. Households with vulnerable individuals who are facilitated to form groups (VG) so as to implement income generating activities.

2.3.3.2 Participatory Framework used by TASAF

In order to support all communities equally, TASAF adopted and advocates community driven development (CDD) as an approach that reduce spatial inequalities and supports participatory decision making and community control of resources. Through the Community-Driven Development (CDD) approach communities have direct control over key project decisions, including management of investment funds. The CDD approach is a mechanism, therefore, for enhancing sustainability, improving efficiency and effectiveness, allowing poverty reduction efforts to be taken to scale, making development more inclusive, empowering poor people, building social capital, strengthening governance, and complementing market and public sector activities (TASAF, 2009).

CDD recognizes that with access to information on principles and procedures, and support from local government authorities, poor communities are prime actors in the development process. TASAF directly funds small community managed projects and allow poor people to become actively involved in the development of their communities by facilitating them to identify their own priorities, implement their own sub projects while managing project funds. The main pillars of this approach are community empowerment, decentralized decision making, accountability, and transparency.

The CDD approach intends to build capacity and empowers poor households and minorities in the poorest villages to assess their needs and priorities. This is expected to reduce spatial diversity in participation and enable communities to plan, manage and implement their own public investments in a decentralized and transparent manner. TASAF insists on priorities which are demand driven and those based on the request from communities. These may include; water supply, roads, education, health, irrigation and agriculture, income generation and environmental activities (TASAF, 2011).

Through a participatory process, LGA staff and selected villagers act as facilitators and trainers guiding communities in preparation and operation of the projects that will address their defined priorities. Through this approach many more community investment has been created through TASAF. Notable achievements are in areas of water supply, construction of schools and health facilities, building of access roads and support to individuals into implementing income generating activities (URT, 2011).

TASAF believes that poor communities or spatial units have great capacity than generally recognized and can make good use of resources targeting at poverty reduction once given the opportunity and adequate support. Unlike waiting for government funding at hundred percent, communities form part of the process in creating the assets

2.3.3.3 Applicability of TASAF Participatory Approach

When TASAF began its operation through a pilot program in 1999, in eight districts of Tanzania mainland, there were some doubts if the approach would work. In some of the areas there was reluctance in community participation and contribution as this was a new phenomena. Some questioned the legitimacy of the system while others asked what happened to government commitment to care and provide for its citizens. Such doubts

came about because people referred to history. In the past, the local authorities decided for the communities in the rural areas on what is good for them. Firms would be given contracts to put up construction structures such as of schools and dispensaries while communities stayed at the receiving end.

Gradually the system was adopted and accepted by communities. The project design provided the opportunity for rural communities to learn by doing. They took part in meetings to discuss their felt needs and how they can contribute into addressing them. Opportunities then unfolded for women. Their involvement and participation in decision making was enhanced not by design but by choice to address conditions they persevered for a long time.

2.3.3.4 Achievements of TASAF

In its implementation over 12 years TASAF has recorded substantial achievements based on the use of participatory approach. It has shown that up to years 2011, More than 1700 sub projects were funded by TASAF, 7.3 million beneficiaries in 40 districts and Zanzibar were reached through supported sub projects, 113 646 Poverty Reduction Projects direct to beneficiaries (47% women) and transferred cash income was US\$ 3.3 million, 136 333 beneficiaries trained in various aspects of project management. More than 20,000 members of Community Project Committees, more than 1500 district facilitators, about 200 NGOs/CBOs as well as Council Management Teams were trained (TASAF, 2011).

2.3.5 Challenges of TASAF

On the other hand TASAF is challenged by number of issues including spatial differences in poor participation process in various ways i.e. Government and development practitioners, political and legal structures do not encourage and support or community

participation. Most of the programs for community development are identified by the Government or Non Government organizations household members are just involved at the implementation level as a result most of the programs fails as they do not meet the community expectations and the real community needs (TASAF, 2011).

Other challenge is ability of all communities which are either spatially different in sustaining achievements made by improving operation and maintenance schemes (TASAF, 2010). Although beneficiary communities have set up operation and maintenance committees, capacities of these committees is still weak and obviously additional efforts by local governments is needed to ensure that village leadership is facilitated with technical support so that created assets remain in good order and functional.

Capacity building in other spheres of development is still a challenge which needs to be emphasized. Although this takes time and consumes resources, it has to be recognized that it is an essential investment that needs to be built for future development. With community facilitators in place, communities will be able to mobilize themselves into making a difference in their lives.

2.3.4 Methodologies for Assessing Spatial Diversity in Participation and Poverty Reduction Programmes

Spatial diversity or variation means something that varies with position (distance) and spatial difference means differences in position i.e. distance. $f(x, y, z)$ is a function of spatial coordinates, $g(t)$ is a temporal function i.e. a function of time. Various tools can be used to measure spatial difference of different phenomena under a given study. Caven *et al.* (2010) used statistical software Minitab. Statistical methods used were One-way

ANOVA; Two-way Chi-Squared and graphical representations of data were constructed using Microsoft Excel.

Bagherian *et al.* (2009) employed likert scales to measure socio demographic characteristics influencing spatial diversity on participation. The study identified socio-demographic characteristics which influence participation differences in different spatial units. The study employed five point likert scales for measurement and satisfaction of prior programs instruments were employed three point scales and level of people participation were measured with five point scales. The study used Chi square to test correlation of variables and later probit regression models were applied to test the strengths of independent variables. Again, the study used two point scales to measure knowledge and attitudes of respondents participating in Watershed Management Project. Again The Cronbach Alpha was used to measure the reliability of instruments used in the analysis of data

Taylor *et al.* (2008) suggested four methods of measuring approaches to spatial diversity in household participation. The methods based on the four conceptual ways of participation namely; (i) contributions (ii) instrumental, (iii) community empowerment and (iv) developmental approach.

In 2005 Jensen and Tarp, conducted an empirical research bearing on the theoretical expectations of public deliberation and its contributions to spatial engagement in poverty reduction initiatives. The focus of this review was on the role of a particular public participation process (i.e., public deliberation) on citizen participant and general public outcomes primarily, and on political decision making outcomes secondarily. The review

takes a theory-based approach to evaluation in its assessment of benefits of public deliberation.

Davis and Negash (2007) studied variations of gender, wealth, and participation in Community groups in Meru Central District in Kenya. In their analysis they used descriptive analyses. Measures of independence and association such as the chi-square statistic and the gamma measure (γ , for ordinal data), and multiple linear regression were used to examine and predict relationships among the study variables.

2.3.4.1 Measuring Spatial Diversity

Measurement of spatial inequality has also evolved in different fashions which include different approaches. For instance, Sahn and Stifel (2003) use Chi square to conduct tests of rural-urban convergence in achievement indices for eight different welfare indicators. They conclude that “there is only convergence in cases of enrolment and stunting; and when we exclude Nigeria, there are no cases of convergence, while there is statistically significant divergence in cases of asset poverty and enrolments.”

Friedman (2005) highlights another dimension of spatial diversity that is the poverty reducing impact of growth differs from region to region in Indonesia. The study conducted an assessment of spatial inequality of poverty measurements from Indonesian household consumption and demographic data. This information is provided by six successive waves of the Indonesian National Socioeconomic Survey, known by its Indonesian acronym SUSENAS - which is an annual survey that includes a detailed consumption component every three years. This study utilizes the 1984, 1987, 1990, 1993, 1996, and 1999 consumption components. The criteria for welfare consistent measure is represented by;

the cost of a predetermined, culturally appropriate, and adequately nutritious basket of food goods.

Jensen and Tarp (2005) carry out a number of simulation experiments to analyze spatial diversity in poverty impacts in Vietnam. Their analysis based on a model of trade. The study used two dimensions of poverty measurement. These are; the traditional Foster-Greer- Thorbecke (FGT) measures of poverty headcount (P0), poverty gap (P1), and poverty depth (P2). On the part of traditional FGT poverty gap measure (P1) is that relative changes was used to measure relative changes in the monetary poverty gap (POVGAP), defined as the total amount necessary to raise the income of every poor individual to the poverty line level ($N \times P1 \times POVLIN$).³ Given a constant household group population and a constant poverty line, the relative change in the monetary poverty gap is given by $dPOVGAP/POVGAP = d(N \times P1 \times POVLIN) / (N \times P1 \times POVLIN) = d(P1)/P1$. On the other hand poverty depth among poor individuals (P2*) and the monetary poverty gap (POVGAP), were used the depth of poverty as an impact of trade liberalization.

Also Escobar and Torero (2005) conduct a statistical analysis in which explanatory variables are introduced in sequence to explain regional income variations in Peru. In this area the study analyzed the evolution of geographic patterns and the importance of clustering in some areas by using spatial econometric techniques, such as the Moran I statistic. The study measured for the presence, over time, of spatial concentration of per capita expenditure and geographical, private and public assets and test for their significance. In the second stage, to formally answer whether geography has a causal role in determining how household welfare evolves over time, we developed an estimable micro model of consumption levels and growth. Study identified number of explanatory

variables including set of individual characteristics such as human assets (x), a set of private assets (z), a set of public assets at the district level (r) and a set of variables comprising specific geographic characteristics such as climate, soil characteristics and altitude (g). Specifically the change in consumption equation is: $\Delta cp = a + \beta xp, 0 + \phi zp, 0 + \gamma rp, 0 + \phi gp + \varepsilon p$ (1) in which the subscript p refers to province level averages of the respective variables, and the subscript zero refers to information of the initial period, geography (g), neighboring public assets (r), private assets (z), and individual characteristics (x) and identify the direct externality effects of the presence of each of them.

Despite of presence of different measure of inequality of poverty, there is consensus, after a great deal of analysis of what are appropriate poverty and inequality measures. Other works set of measures known as the Foster, Greer and Thorbecke. They take the general form: $P = 1 / n \sum (1 - y_i / y_x)^a$ where the poverty measure (p) is a function of the total number (n) of households and the incomes of that sub-set whose income (y_i) is below the poverty line (y_x). Varying the parameter (a) from 0 to 1 to 2 provides estimates respectively of the numbers of poor people and the intensity and severity of their poverty. There remain significant problems in data collection, particularly related to the equivalence problems discussed above, but these poverty lines, when properly and accurately estimated, are now sophisticated and reliable indicators of trends in poverty as defined. The adequacy of this definition is discussed next.

In addition to available methods, recent study in have applied wealth index to measure housing wealth gap. Thomas and Dorling (2007) extended such methodologies further and applied them in order to estimate the size and geographical distribution of households that can be considered to be asset wealthy and exclusive wealthy.

2.4 Theoretical Framework for Spatial Diversity of Household Participation in Poverty reduction programmes.

Participatory theory originates from two ideologies: (i) the alternative development discourse and (ii) Paulo Friere philosophy of humanization through conscientization (Bretty, 2006). The above mentioned ideas believe that people's involvement in poverty reduction programmes is a basic factor for minimization of poverty differences among household members in different localities. It is argued that spatial diversity of poverty in terms of income, food security or material wealth can be reduced through active participation in poverty reduction programmes (Rifkin and Kangere, 2001). Pretty *et al.* (1995) insists that if poverty reduction programmes will ensure full participation of beneficiaries' then spatial diversity and poverty inequality will be reduced. Therefore, in order to attain balanced growth, poverty reduction programmes are expected to ensure high involvement of local people at all stages of programmes management. This should go together with equal levels of participation among household members (Clarke, 1992). When there is spatial diversity in participation levels, programmes need to address socio-economic and spatial factors that influence participation in poverty reduction programmes (Munch, 2007). The communicative theory (Habermas, 1991) provides theoretical explanation on the causes of spatial diversity of household participation in poverty reduction programmes. The theory explains principles of 'communicative action' and 'consensus' through deliberation and reasoning. These principles are as follows:

- (i) Teleological action, this suggests that an individual decides to participate in poverty reduction programmes when there will be relative good payoff from the programme as compared to others that exist in the area where the programme exists. Teleological gains could be; better employment (EMP) prospects, generated

income (INFRA) and reduced distance (DIST) from residential to the project area, travelling costs (AGGROLMER).

- (ii) Normatively regulated action, this implies that an individual decides to participate when the programme will adhere to norms (NORMS) or expected behaviour (BEHA) of an individual, education (EDUCA) of individuals (Bolton, 2005).
- (iii) Dramaturgical action which refers to number of dramaturgical persons such as age (AGE) or elders (ELD), religious leaders (RELIL), traditional healers and elites (ELITE) who are believed to have a large influence in constraining outside interventions (Bolton, 2005).
- (iv) Communicative action which refers to mutual advantages between actors in the project. Mutual advantage is measured by similarity in education (EDU) levels and programme management skills (SKILLS) between programme implementers and beneficiaries, place of residence (RESID), marital status, (MARITAL), occupation of project beneficiaries (OCCU), gender balance (GENDER), age (AGE) and Household Size (Hhsize) .

Theoretically, the above aspects tend to be factors which encourage households' participation in poverty reduction programmes. When such factors are balanced across spatial units, they may reduce spatial diversity of household's participation in poverty reduction programmes (Bolton, 2005).

2.5 Research Gap

The Government of Tanzania and other stakeholders are continuously trying in various ways to ensure that households' participation in poverty reduction programmes is enhanced so as to reduce poverty. However, the effectiveness of households' participations in poverty reduction programmes is doubtful as very few areas have shown

positive changes. Studies by Sakijege *et al.* (2014), Kamuzora *et al.* (2013) and many others hold that, some parts of Tanzania are characterized by weak community participation. Unfortunately, these studies have neither attempted to indicate level of variation among households' participation nor indicate factors which influence their participation in poverty reduction programmes.

2.6 Conceptual Framework

The concepts of spatial diversity and participation as raised in the literature are important analytical lenses for understanding and explaining many of the issues investigated in this study. This study has been built on the assumption that, spatial diversity of households' participation is a cause of failure of participatory programmes. Spatial diversity of household's participation is the difference in level of participation between different spatial units. In this study spatial units refer to districts and villages (Elbers *et al.*, 2005; Escobal *et al.*, 2005). The major gap of literature is that, the level of spatial diversity of household's participation is not known.

Another assumption is that spatial units (districts and/or villages) have significant variations which cause spatial diversity of households' participation in poverty reduction programmes. The spatial variations are observed through households' characteristics on groups of factors namely; socio-economic, service and physical factors. The group of socio-economic factors include; gender, age, marital status, education, income, household size, main occupation of the head of household and location of household. The group of service factors include; ownership of a house, ownership of a bicycle, ownership of cattle, ownership of goats, access to food, access to health, services, access to water, access to primary school. On the other hand the group of physical factors includes; agglomeration cost advantage, land resource, pasture, climate and distance to project area.

These factors are assumed to be primary cause of spatial diversity of households' participation in different ways. The major assumption is that when these factor change then a household's participation status will automatically change. For example if household will; increase their income, increase education, increase their household size, stay in rural centre's, address gender imbalances, rely on farming as major occupation , then they will be able to participate more than if it is otherwise. Likewise, when household own a house, a bicycle, goats, cattle, has access to adequate food, health service, water and primary education they will be able to participate more. The concern of spatial factors is that, for households to participate more in poverty reduction programmes they need support of climate, vegetation, availability of land, agglomeration cost advantage and reduced distance between residence and project area. Another assumption is that when households' participation in poverty reduction programmes increases it will have direct influence on poverty reduction. The relationship of variables is as depicted in the conceptual framework are as presented in Fig 1.

2.7 Summary of the Chapter

This Chapter has articulated the character of Tanzania's post-independence development participatory planning and poverty reduction efforts. It has teased out links between participation and poverty reduction poverty reduction. It has described the key phases of Tanzania policy and participatory planning history, including key development paradigms and policies that have guided the country's policy and planning processes, and the main poverty reduction programmes that the country after independence. The theoretical and conceptual models of spatial diversity of household's participation in poverty reduction programmes captured and summarised this discussion more succinctly, and revealed the links between different socio-economic, service and physical factors that influence spatial diversity of households' participation in poverty reduction programmes.

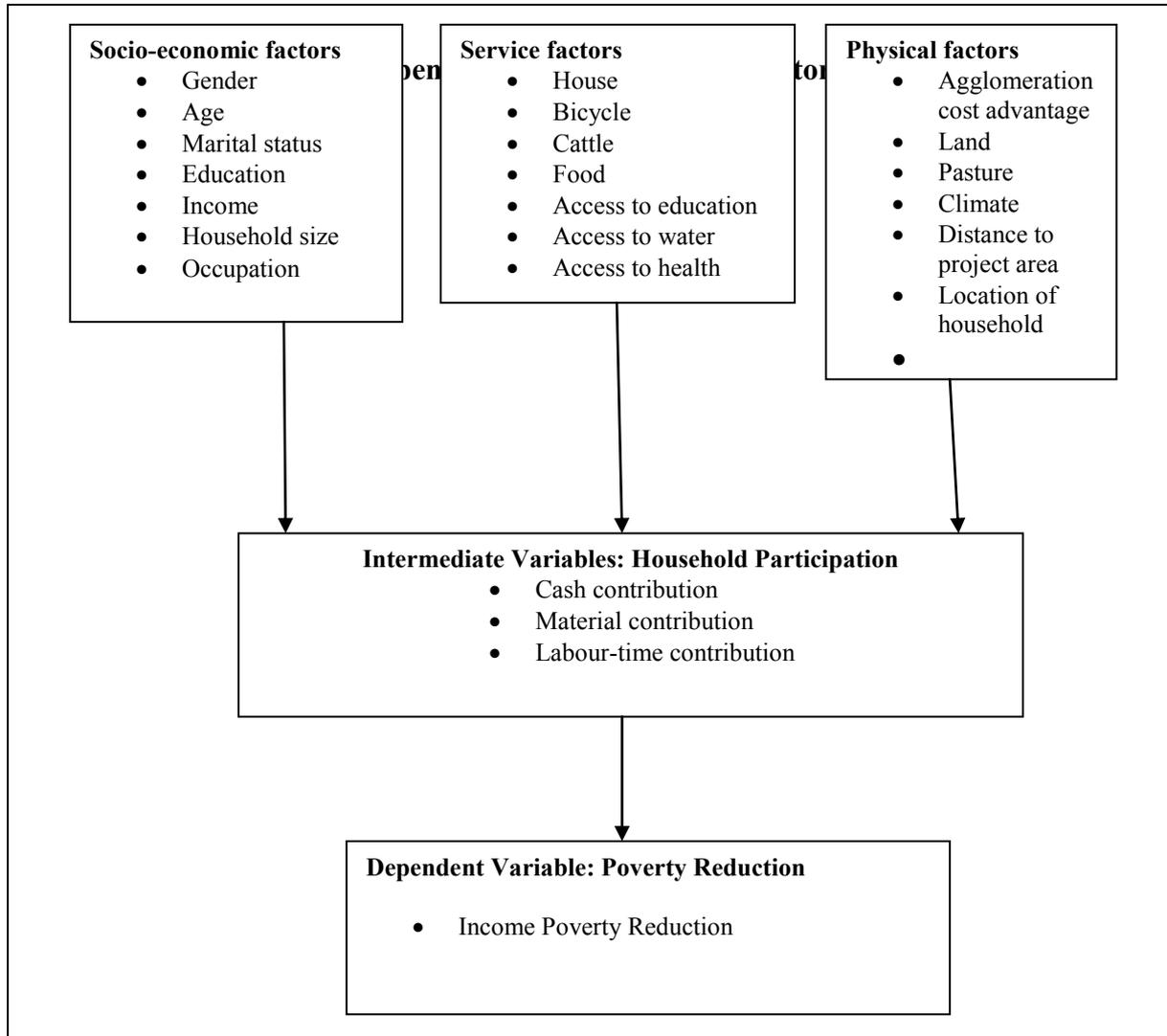


Fig 1: Conceptual Framework of Spatial Diversity of Households' Participation in Poverty Reduction Programmes.

The Chapter illustrated that participation has a direct relationship with poverty reduction outcomes. It revealed that Tanzania has a history of bottom up top-planning and participatory structures that favour spatial equality in poverty reduction of the majority poorer. There has been a notable government and other stakeholders influence on the poverty reduction, through participatory approaches and frameworks. The chapter also shows that, poverty reduction programmes are also affected by low households'

participation from some parts of the country. This situation causes divergence of participation from different spatial units. Using the theoretical and conceptual models the literatures has suggested number of socio-economic, service and physical factors to be tested and proved if are responsible for setting spatial diversity of household participation in poverty reduction programmes.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Selection of Study Areas

The study area involved three districts namely: Rungwe, Mvomero and Bahi in Mbeya, Morogoro and Dodoma regions, respectively. The selection was based on the need to find TASAF based representative districts which are different in terms of participation levels. Based from TASAF Subproject reports of 2010, Rungwe, Mvomero and Mbeya showed clear differences on number of participating beneficiaries. Another criterion for the selection of three districts was the differences of districts in terms of physical features. Physical features considered were; climate, natural resources, agglomeration cost advantages, infrastructure, and location of the district. Based on this requirement Rungwe District from the Southern Highlands, Mvomero District from the Eastern Zone and Bahi District from the Central Zone were selected accordingly. Within the districts, two villages were selected by considering the villages which have income generating projects. Income projects were chosen as they provide room for measuring respondent's willingness to participate as they use voluntary approach in engaging beneficiaries. In Bahi District, Lukali and Chipanga- A villages were selected. These were part of 8 villages which have income generating activities in the District. Likewise Kichangani and Nyandira Villages were selected from Mvomero District as these villages were among the 18 villages with income generating projects in the District. Also Ibuma and Kifunda villages were selected from Rungwe District as they are among the 12 villages with income generating projects in the District. The major income generating activities from the project were; oxen hiring, dairy goats, pig keeping and poultry keeping.

3.1.1 Bahi District profile

Bahi District is one of the six districts of Dodoma Region. Other districts include Chamwino, Dodoma Urban, Mpwapwa, Kondoa, Mpwapwa and Kongwa. Bahi District extends between latitudes 4° and 8° South and between longitudes 35° and 37° East. Bahi District boards Iringa Region to the Southwest, Singida Region to the West, Chamwino District, Dodoma Municipal to the East and Kondoa District to the North (Bahi District Profile, 2010). Figure 2 shows the map of Bahi District.

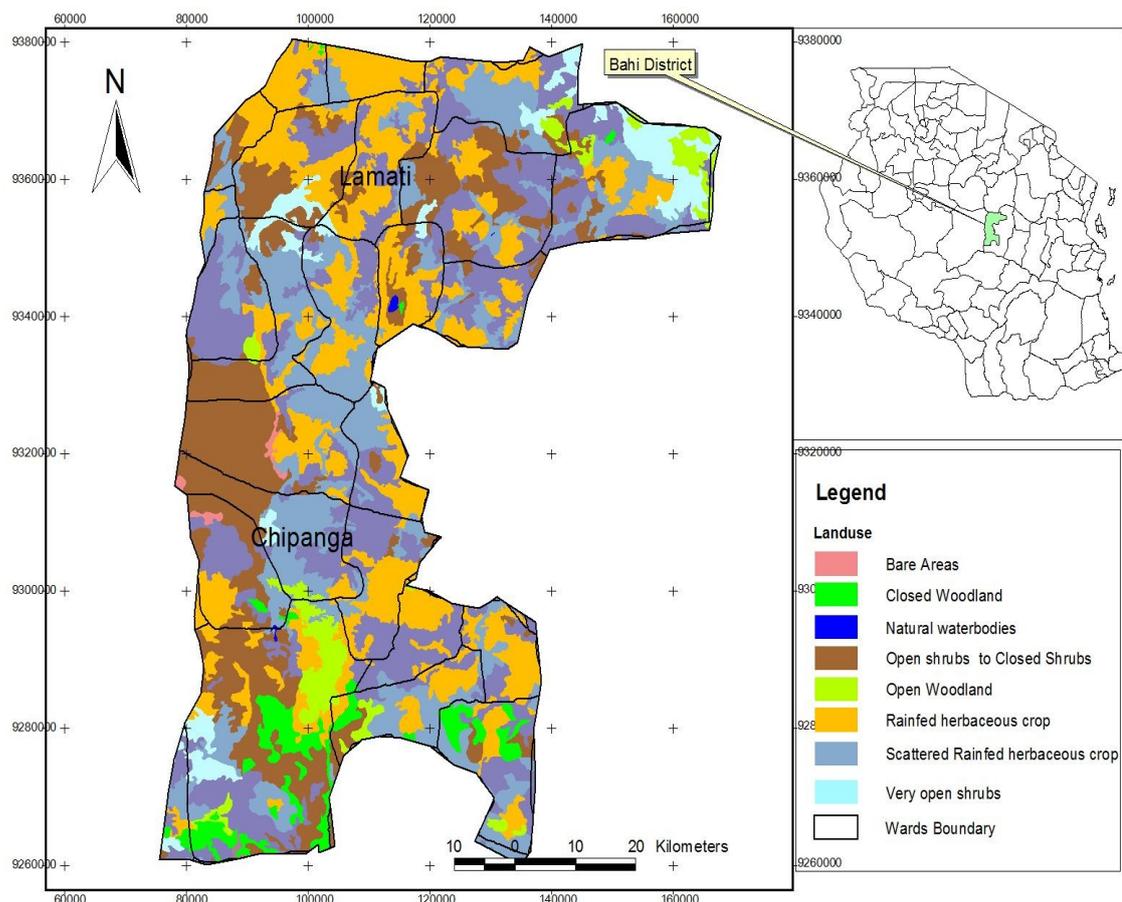


Figure 2: Map of Bahi District with Vegetation and Land Forms

Bahi District has a land area of 544 842 hectares. Out of the 544 842 hectares, 70% is arable land. The District has 4 divisions, 20 wards and 56 villages. Rainfall in the District ranges from 500 mm to 650 mm per annum. Bahi District experiences both high and low

temperature. The highest temperature normally reaches 31⁰C while the lowest is 18⁰C (Bahi District Council, 2012).

The economy of Bahi District depends on agriculture and livestock mainly cattle and goats. The main crops grown in Bahin District are rice, maize, and sorghum. Other crops include beans, potatoes, tomato and millet. With exception of paddy, cultivation is carried out mainly by use of the hand hoe where as family labour and hired labour are the unit of production. Tractors and power tillers are used in paddy fields but available only to a few farmers. Livestock keeping is highly practiced in Bahi District but with limitation of water, pasture, and modern methods such as enclosure system, dips etc. Therefore the production of meat and milk is still low and not competitive to cause the district lose opportunities which could be obtained through modern livestock keeping technologies.

3.1.2 Mvomero District profile

The Mvomero District is one of the districts in Morogoro Region. Other districts include Kilosa, Kilombero, Morogoro Rural and Ulanga. The District is located Northeast of Morogoro Region between latitudes 8 000" and 10 000" South of the equator and between longitudes 37 000" and 28 022" East of Greenwich. The District has the following borders; Kilosa District to the East, Ulanga and Kilombero Districts to the South, Kilosa District to the West and Arusha Region to the North (URT, 2003). According to the population census of 2012, Mvomero District has a population of about 260 525 people with a population growth rate of 2.6% with an average of 4.6 people per household and an average population density of 22.3 persons per square km (URT, 2013). Figure 3 shows a map of Mvomero District. The altitude of Mvomero District is between 380 meters and 1 520 meters above sea level. This altitude provides a suitable climate for tropical and subtropical varieties of crops. The district receives a bimodal type of rainfall with peaks in

April and December for long and short rains respectively while May to October remains relatively dry. The average rainfall amounts to 1 200 mm per annum with variations from 800 mm to 2 000 mm. The district's economy like most of Morogoro districts depends on agriculture mainly crop production.

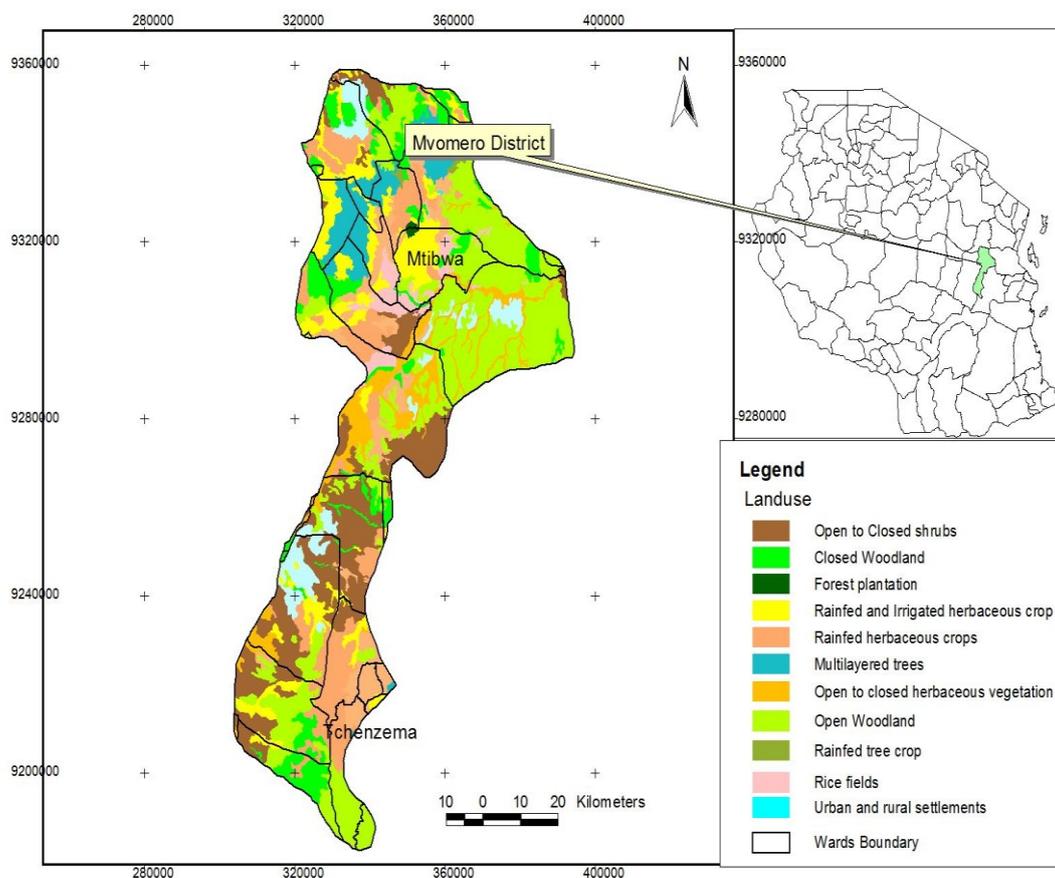


Figure 3: Map of Mvomero District with Vegetation and Land Forms

The main crops grown in Mvomero District are: cassava, rice, maize, and bananas. Other crops include beans, millet, peas, potatoes, coffee, groundnuts, citrus fruits, mangoes, jackfruits, sugarcane, palm trees, tomato and eggplants. With exception of few paddy and sugarcane, cultivation is carried out mainly by use of the hand hoe, using primarily family labour and hired labour when the situation demands. Tractors are available only to a few individuals. Livestock keeping is also practiced in the District.

3.1.3 Rungwe District profile

Rungwe District is found in Mbeya Region, South West Tanzania. The district is located between latitude $8^{\circ}30'$ and $9^{\circ}30'$ South of Equator and longitude 33° and 34° East of Greenwich Meridian of Tanzania. Rungwe District covers a total area of 2211 square kilometers of which 1668 square kilometers (75%) of the total area is arable land used for agriculture. Fig 4 shows a map of Rungwe District.

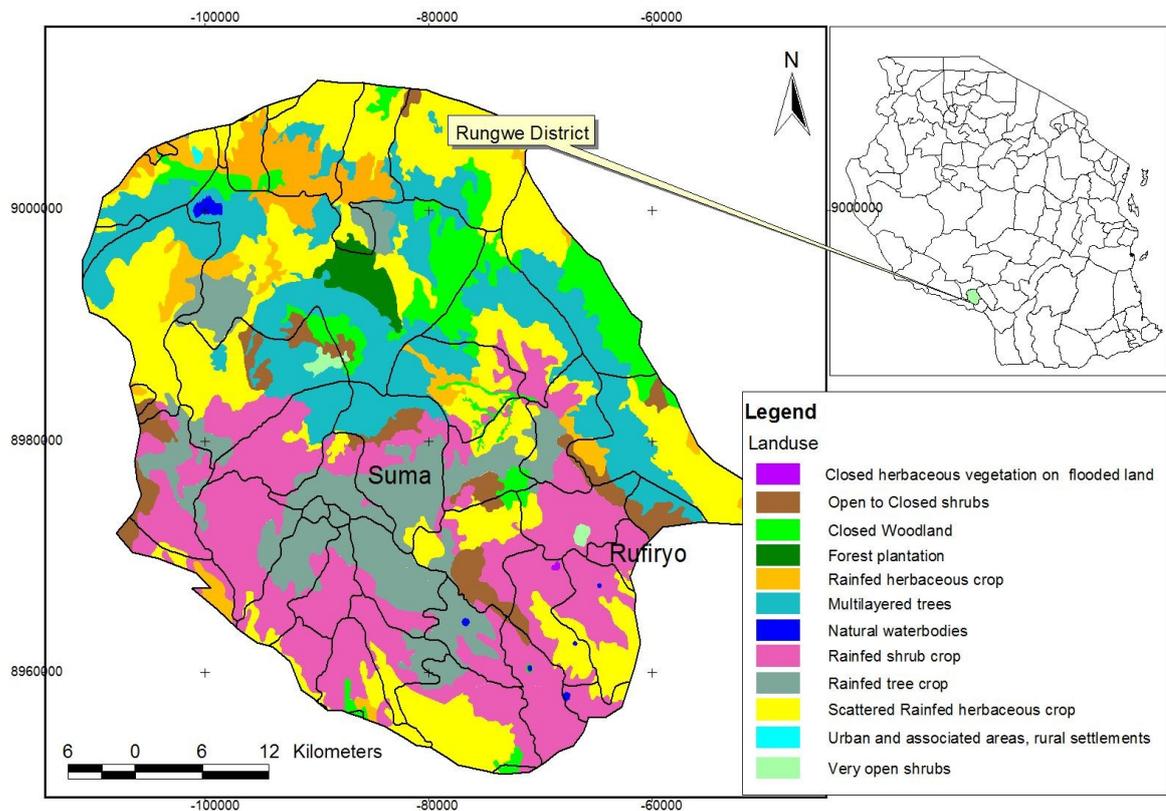


Figure 4: Map of Rungwe District with Vegetation and Land Forms

Average rainfall ranges from approximately 900 mm in the lowland to 3 300 mm in the highland zone. The district is located between 770 metres and 2865 metres above the sea level. Rungwe District is divided into three agro-ecological zones, namely the upper, middle and lower zones. The upper/highlands zone is a continuation of the Uporoto

Mountains covering about 10% of the total area of the district with an altitude of 2 865 metres above the sea level. The highlands zone is cold throughout the year with the average rainfall ranging from 1 500 mm to 2 700 mm per annum.

The main economic activity is agriculture whereas crops grown include, tea, coffee, bananas, sugar cane, round potatoes, maize and pyrethrum (URT, 2010). According to population census of 2012 the population in Rungwe district is be 334 924 by October with 139 inhabitants per sq.km. Rungwe is one of the densely populated districts in Tanzania.

3.2 Research Design

Research design is a plan that describes how, when and where data are to be collected and analyzed. Eckell (2008) define a research design as the researcher's overall plan for answering the research question or testing the research hypothesis. This study used a cross-sectional research design to capture both collection and analysis of data. This design used a case study analysis where as spatially differing districts namely; Bahi, Mvomero and Rungwe were selected to represent TASAF operational districts in Tanzania. The collection of data was done in one round from July to December 2011.

3.3 Sampling Procedure and Sample Size

3.3.1 Sampling Procedure

Sampling procedures is the technical process that would lead a research to obtain a sample that is representative of the population. This study used a multistage sampling technique. The first stage involved purposive sampling to sample three regions namely; Mbeya, Morogoro and Dodoma. The sampling criterion for selection of three regions was the physical features differences. The second stage used purposive sampling to select one

district to represent high, average and low participation levels from three regions. Based on the data from TASAF operational districts, Rungwe, Mvomero and Bahi districts were selected respectively. The third stage involved purposive sampling to select six villages, where as two villages were selected from each of the selected districts.

The sampling of villages used purposive sampling by considering (i) location difference of the villages; (ii) villages with TASAF income generating project. In this case Kifunda and Ibumba villages were selected from Rungwe District. Kifunda Village has Poultry keeping project for income generation while Ibumba Village has Pig keeping for food security. Nyandira and Kichangani villages were selected from Mvomero District. Nyandira has a Dairy Goat keeping project for income generation to support Orphans. Likewise Kichangani Village had Dairy Goat project for food security to support vulnerable women in the village. Lukali and Chipanga - A Villages were selected from Bahi District. Lukali village has an income generating project of oxen keeping project while Chipanga-A Village has food security project of dairy goats to support vulnerable women in the village.

3.3.2 Sample unit and sampling of respondents

This study considered a household as the sampling unit whereby a household is defined as a person or group of persons that usually live and eat together. A household is not the same as a family since a family only includes people who are related; rather, a household includes all people who live together, whether they are related or not (UNESCO, 2004). Therefore, the sampling of respondents involved purposive sampling to select 80 household representatives per village. The household representatives interviewed were either; husband =1, wife =2, elder children=3, relatives =4 or non relative who are well informed about the household=5. A total of 80 household representatives were randomly

drawn from each of two selected villages in the districts. The village selected were either having income generating project or food security project.

3.3.3 Sample Size

This study is informed by the sample size of 480 respondents who are household representatives. The selection of 480 was done after selecting 80 respondents from each of six selected villages. The decision to select 80 respondents per village was reached after considering the researcher capacity and time to reach 80 respondents per village out of an average of 250 households in selected villages.

On the other hand, these findings are also supported by primary data collected from key informants. Group of key informants included Districts officials, TASAF District Coordinators, Ward Executive Officers, Village Executive Officers and Members of Project Committees, The key informants provided administrative and technical data related to households' participation trends and behaviour, spatial diversity of households' participation and best practices in participation within TASAF programme. Table 1 shows respondents and key informant included in this study.

Table 1: Respondents and key informants from selected districts

S/N	Category of Respondents	District			Total
		Bahi	Mvomero	Rungwe	
1	Households	160	160	160	480
2	Heads of Department and Sections	5	5	5	15
3	TASAF Village Fund Coordinators	1	1	1	3
4	Members of Project Committees	4	4	4	12
5	Ward Executive Officers	2	2	2	6
6	Village Executive Officers	2	2	2	6
	Total	194	194	194	522

3.4 Data Sources

Both primary and secondary data sources were used in this study. The details of each category are presented in the subsequent sections.

3.4.1 Primary Data Sources

Primary data are those data collected by the researcher from the first hand experience. These are data collected from respondents and observed situation. In this case, this study collected primary data from respondents and key informants drawn from sampled villages. Such respondents involved; (i) Heads of Households, (ii) District TASAF Coordinators, (iii) District Heads of Departments and Sections supported by TASAF, (iv) Ward Executives and (v) Village Executives.

3.4.2 Secondary Data Sources

Secondary data are data collected by others and readily available for further analysis. In this study, secondary data were collected from different sources such as District offices, TASAF offices at District level, official reports like; Poverty and Human Development Report of Tanzania, Household Budget Surveys, 2008 and 2012, Comprehensive Food Security and Vulnerability Survey and TASAF Operational Manual.

3.5 Methods of Data Collection

As noted in Chapter 2 (literature review) that the research gap before this study is lack of studies that addressed issues of spatial diversity in households' participation in poverty reduction programmes and its influence on poverty reduction (Hataya, 2007). Based on this gap, this study aimed not only to assess the phenomena of spatial diversity in a wider scope, but also to have empirical analysis of such facts and achieve high degree of generalization to a larger group of development projects in Tanzania. For this purpose,

both qualitative and quantitative sources of data were considered useful to reach an in-depth understanding of the phenomena (Can, 2009). Therefore, this study used both qualitative and quantitative research methods. The qualitative research methods include; Focus Group Discussion (FGD), observation and key informant interviews. On the other hand Quantitative Methods of data collection involved questionnaire and Secondary data.

3.5.1 Focus Group Discussion and Key Informants' Interviews for Qualitative Data

The main purpose of qualitative data was to develop a background to build a questionnaire and a provisional model to be used in the quantitative phase. Therefore, this stage was designed to generate in-depth and rich descriptions about spatial diversity of household participation in poverty reduction programmes. Key informants' such as; TASAF District Coordinators, Heads of Departments and Sections, WEOs, VEOs and project committee members provided information which could not be secured from other sources.

Guiding questions for interactions with key informants and focus groups were developed accordingly. The information collected was related to setting of an understanding on what are the real causes of spatial diversity of participation in poverty reduction programmes. The FGD also facilitated the establishment of both cause and effects of the problem of spatial diversity in participation. The institutional arrangements for the programmes management was also investigated at this point. In addition key informants' survey and the FGD were used to highlight the participation problems that exist in the TASAF programme areas that lead to compromised impact of the programme. The institutions visited included TASAF Head Quarters, Bahi District Council, Mvomero District Council and Rugwe District Council.

3.5.2 Observation Technique

To establish a real picture of the level and impact of spatial diversity in household participation in poverty reduction programmes, the researcher conducted physical observation in TASAF sub-project areas. The physical observation established the concrete evidence on the spatial diversity of households' participation status of projects and the livelihood of household members participating in TASAF projects, against those who do not participate. This technique was able to examine the involvement of; beneficiaries, local leaders, traditional opinion leaders, members of Project committees as well as the members of the general public in ensuring good impact of TASAF projects.

3.5.3 Survey Questionnaires

Information generated from qualitative research methods such as; observations, FGDs and key informants interviews were used to develop questionnaires. Data from structured questionnaire were used to prove the level of spatial diversity of households' participation in poverty reduction programmes, factors and effects of spatial diversity of households' participation in poverty reduction programmes.

3.5.4 Secondary Data Collection

Secondary data collection aimed to capture data from secondary sources so as to support study findings. The collection of secondary data involved visiting various secondary sources so as to understand the in-depth and seriousness of a problem of spatial diversity of households' participation in poverty reduction programmes. The secondary data were able to show types of TASAF villages projects, status of implementation and modality of households' participatory within TASAF programme.

3.6 Data Processing

Collected data were coded and entered into SPSS Spread Sheet for descriptive statistics and inferential statistical analysis. The descriptive and inferential analysis was preceded with the cleaning of data to remove the outlier's i.e. data outside of expected range.

3.7 Data Analysis

3.7.1 Validity and Reliability of Instruments

Data analysis started with assessment of validity and reliability of data. The procedures of validity and reliability are indicated in the subsequent sections.

3.7.1.1 Validity

Validity is about trustworthiness, authenticity and transferability of findings. This study applied triangulation of data collection techniques and confirmation of findings so as to assure validity of findings. In order to establish the validity of the instrument, this study used the pilot test technique or pre test of questionnaire whereas the study selected 60 or 15% of the sample size selected (480). These respondents were randomly selected from Chamwino District which was not part of the sampled districts. Later Concurrent Validity was used to test validity of the scale used to measure participation levels. Statistically, concurrent validity is relevant when the criterion measures are obtained at the same time as the test scores. This indicates the extent to which the test scores accurately estimate an individual's current state with regards to the criterion. Further, to confirm concurrent validity, average variance was extracted for each construct. Since findings were taken at one point then concurrent validity was observed to be appropriate for this study. The Concurrent validity was computed using ANOVA with Friedman Test.

3.7.1.2 Reliability

Reliability is about consistency of data in providing aimed results. According to Jules Pretty (1994), reliability is an alternative framework for judging qualitative information sharing and applicability to other contexts. This study used Cronbach's Alpha to test reliability of the scales. Cronbach's alpha is an index of reliability associated with the variation accounted for by the true score of the "underlying construct." Construct is the hypothetical variable that is being measured (Hatcher, 1994). Alpha coefficient ranges in value from 0 to 1 and have used to describe the reliability of factors extracted from dichotomous (that is, questions with two possible answers) and/or multi-point formatted questionnaires or scales used in this study (rating scale: 0 = not participating, 1=low participation, 2 = medium participation, 3 = high participation and 4 = highest participation). The results of Cronobach Alpha have shown in Table 12.

3.7.2 Descriptive Analysis

3.7.2.1 Socio-economic Characteristics of Respondents

The study used frequencies and percentages to analyze characteristics of interest i.e socio-economic characteristics. The households' socio-economic factors are many and complex; however, this study selected few socio-economic factors which were considered associated with spatial diversity. These involved age, gender, marital status, education, income, location of households, and main occupation of the household. Prior to analysis of objective one the study established the participation index. In this case, the study defined participation as an attempt of households to contribute cash, labour -time, and materials in the TASAF projects. This definition was adopted from Taylor *et al.* (2008) who identified contribution as the first and useful method of measuring household participation

3.7.2.2 Objective One

Objective One intended to identify levels of spatial diversity on households' participation in poverty reduction programmes. The study used inter-quartile range using median values and plot-box to analyze and present district differences in households' participation levels.

3.7.3 Inferential Analysis

Inferential statistics involves advanced statistical techniques which test hypothesis and drawing conclusions about a population, based on your sample. Inferential statistics aim to draw conclusions about an additional population outside of the dataset. Inferential statistics is divided into parametric and non-parametric statistics. This study used parametric methods such as; ANOVA, and Post Hoc. Apart from parametric methods other inferential methods included; Friedman Test, Cronobach Alpha and Linear Regression.

3.7.3.1 Objective Two

The study used ANOVA and Post Hoc tests to assess significance of spatial variations of household participation in poverty reduction programmes. With regard to objective three, ANOVA, Post Hoc explores variation of factors across districts. Comparison of means of districts and villages participation was done through ANOVA. The ANOVA test is useful in determining the variance or difference existing in more than two groups.

The scaling of participation levels was done using an equality index calculated using a distribution equation. The participation index was determined by scale done on equal classification of participation levels based on the highest value (expected cumulative value). The index needs the participation monetary value to be classified into several classes/levels of the same width. This study noted that households' participation levels are

measured in monetary terms by looking at the value of cash, material and labour-time contributed by individuals in the project (TASAF Operational Manual of (2009)). During the survey it was noted that the lowest participation value was TZs 0 and the highest value was Tshs 467 501. Based on this fact and the premises of equality index, the study proposed 5 points scale (0= Not participating, 1=low participation, 2=medium participation, 3=high and 4= highest participation) to measure household participation levels. The Participation Index is determined using an equality index calculated using a spatial distribution of participation equation is as follows;

$$Z = \frac{\frac{1}{N} \sum_{i=1}^N (E_i - O_i)}{\frac{1}{2} \left(1 - \frac{1}{N}\right)} \dots\dots\dots(1)$$

Where as

Z_i = level of participation measured in terms of time, money and material

N = spatial group of household in TASAF programmes

E_i = expected mean contribution of inputs of household/village/district

O_i = observed/actual mean contribution of inputs of household/village/district.

The study measured level of participation by converting all forms of participation (cash, time, materials) into cash. Working of 8 hrs in TASAF project was estimated to cost Tsh 5 000. Materials contributed were converted into cash using the market price. Table 2 shows the scaling of participation levels in converted monetary terms.

Table 2: Participation levels in TASAF Projects

Amount in TZs	Score	Rank
No contribution	0	Not participating
1-100 000	1	Low
100 001-200 000	2	Medium
200 001-300 000	3	High
300 001-500 000	4	Highest

3.7.3.2 Objective Three

The study used ANOVA and Post Hoc tests to detect variation and compare districts which vary in terms of factors which influence spatial diversity of household participation in poverty reduction programmes. After identification of factors which vary across districts, Sequential Linear Regression was used to identify factors which predict influence spatial diversity of households' participation in poverty reduction programmes. The sequential linear regression model is applied when there are groups of factors (socio-economic, Service and spatial) affecting the same phenomenon. In this linear model, the dependent variable Y is a categorization of a continuous, but unobserved variable linear function of some independent variables.

$$Y = 1X1i + \dots\dots\dots jXji + e \dots\dots\dots(2)$$

Whereas; Y = the level of households' participation in poverty reduction programmes, 1X1i = control levels of participation, jXji = vector of factors (i) influencing households' participation in poverty reduction programmes in different spatial units (j). Factors were categorized into three groups namely; socio-economic, Service and spatial.

Socio-economic factors

X_1 = Gender of respondent (Male = 1, otherwise= 0)

X_2 = Age of respondent (years)

X_3 = Marital status (Married=1, Divorced=2, Widow=3, Never married=4)

X_4 = Education (Number of years spent in schools) of

X_5 = Income (low =1, medium=1, high=3, highest=4)

X_6 = Household size (Number of persons)

X_7 = Occupation (Farming= 1, Small business=2, Self employed=3, Worker=4, Entrepreneur=5)

e = error term.

Service factors

X_1 = a house (Own house=1, otherwise =0)

X_2 =a bicycle (Own bicycle=1, otherwise=0)

X_3 = Cattle (Own cattle=1, otherwise =0)

X_4 = Cattle (Own goats=1, otherwise=0)

X_5 = Access to food (Not access=0, low access=1, medium=2, high =3)

X_6 = Access to water (Not access=0, low access=1, medium access=2, high =3)

X_7 = Access to health service (Not access=0, low access=1, medium=2, high access=3)

X_8 =Access to primary education (Not access=0, low access=1, medium=2, high access=3)

e = error term.

Physical factors

X_1 = agglomeration cost advantages (presence of agglomeration cost advantages=1, otherwise=0) X_2 =vegetation support to project (presence of vegetation support=1, otherwise=0)

X_3 = access to land (No access=0, low access=1, medium=2, high=3)

X_4 =favoring climate (favoring climate=1, otherwise =0)

X_5 = distance to the project area (low distance=1, otherwise=0).

X_6 = Location of household (Rural Centre=1, Rural Settlements =2, Interior rural=3)

e = error term.

3.7.3.3 Objective Four

The analysis of objective four involved the use of Linear Regression predicts the influence of participation on poverty. The analytical techniques of objective four is as follows;

$$Z_{ij} = \beta_0 + \beta_1 X_{ij} + \beta_2 X_{1ij} + e \dots \dots \dots (3)$$

Whereas Z is a linear combination of dependent variable that has express status of poverty reduction;

$Z_{ij} = 1$ if i^{th} respondents' income poverty reduced

$Z_{ij} = 0$ if i^{th} respondent poverty income did not reduced

$X_{ij} =$ Participated respondent (i) in district j

3.8 Ethical Consideration

The study used all necessary procedures for ethical requirements in undertaking this research. Firstly, the researcher submitted a letter for the request to collect data in three districts. The letter was submitted to the Districts Executive Directors of Bahi, Mvomero and Rungwe Districts.

Secondly, before interviews respondents were informed of their freedom to participate or not to participate in the interview. Based on such understanding that participation in the interview is voluntary all, 480 respondents accepted and participated in the interview.

3.9 Summary of the Chapter

This chapter illustrated the methodology used to determine area and respondents 'sampling, data collection, processing and analysis. It has shown that the selection of Rungwe, Mvomero and Bahi districts based on the idea to get TASAF operational districts which have high, medium and low households' participation levels, respectively. The sample of respondents was determined by observed levels of participation (Not participating=0, low participation=1, medium participation=2, high participation=3 and highest participation=4). Each of the selected village was observed to have a total of 250 households. The study used the purposive sampling to select 80 households from each of six selected villages. Primary data were collected using questionnaire, interview checklist, FDG and physical observation. Secondary data were captured from different reports such as; government surveys, TASAF reports and district profiles.

The analysis of data used both descriptive and inferential statistics. Descriptive statistics involved frequencies, percentages, mean and median. Inferential statistics involved Friedman Test and Cronobach Alpha to test validity and reliability of scale, respectively. ANOVA and Post-Hoc were used to analyze the variance and make comparisons of districts respectively. Linear regression was used to predict the factors which influence household's participation in poverty reduction programmes, and the influence of participation on income poverty reduction.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Socio-economic Characteristics of Respondents in the Study Area

The analysis of socio-economic characteristics in the study area was done to give a general overview of the distribution of the socio-economic factors such as; age, gender, marital status, education, income, occupation of the head of household and location of household. These characteristics are considered to be important in influencing households' participation in poverty reduction programmes (Clausen, 2007). The study used descriptive statistics such as: frequencies and percentages to analyze socio-economic characteristics of respondents as the analysis meant to simply present the distribution of these variables of interest.

4.1.1 Distribution of Respondents by Gender and District

The analysis of distribution of gender of respondents by districts was done so as to observe gender differences in participation in poverty reduction programmes. Table 3 shows that the proportion of males was 41.7% of the total 480 respondents from the three districts; the proportion of females was 58.3%. Distributions of gender of respondents in individual districts shows that female were many as they proportionally constituted 58.8%, in all three districts. These findings mean that TASAF has larger group of female beneficiaries as compared to males. The implication of these findings is that gender difference in terms of males and females' participation is visible in poverty reduction programmes. These results are supported by TASAF profile at the national level which shows that female beneficiaries constitute 62.3% of total TASAF beneficiaries (TASAF, 2012; Davis and Negash, 2007). This could be due to the fact that, most of poverty

reduction programmes in Tanzania interventions target vulnerable groups which are dominated by females (Cooksey and Kikula, 2006).

Table 3: Distribution of Respondents by Gender and Districts

Gender	Districts							
	Bahi		Mvomero		Rungwe		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Males	66	41.2	66	41.2	66	41.2	198	41.7
Females	94	58.8	94	58.8	94	58.8	282	58.3
Total	160	100	160	100	160	100	480	100.0

4.1.2 Distribution of Respondents by Age and Districts

This study considered distribution of age of respondents by district, since age is considered as one of the important characteristics to be addressed when assessing people representation in poverty reduction programmes (Ssenguya *et al.*, 2013). Table 4 indicates that out of 480 respondents, youth group (18-25) is the largest as it composed 36.2%. Distribution of youth group by individual districts is high in Rungwe as it composed 38.5% and followed by Mvomero and Bahi districts which have 36.5 each. These results connote that Rungwe District had slight high number of youth participating in TASAF programmes as compared to Bahi and Mvomero districts. In many cases, younger population (18-25) appears to be more productive labour than matured and old. Therefore, the implication of these results is that productive age (youth) is high in TASAF projects based in Rungwe District than Mvomero and Bahi.

Table 4: Distribution of Respondents by Age and Districts

Age	District						Total	
	Bahi		Mvomero		Rungwe		Freq	%
	Freq	%	Freq	%	Freq	%		
18-25	56	36.5	58	36.5	64	38.5	178	37.1
26-45	41	25.6	41	25.6	41	25.6	123	25.6
46-65	41	25.6	42	26.2	42	26.2	125	26.0
65+	20	12.5	19	11.7	15	9.7	54	11.35
Total	160	100	160	100	160	100	480	100

*Age groups: Youth= 18-25 years, Matured= 26-45 years, Adult= 46-65years, and Old=65+ years

4.1.3 Distribution of Respondents by Marital Status and District

The study intended to observe spatial distribution of respondents by marital status of in the study area. The information on distribution of marital status is important as it expresses how marital status can affect households' participation in development and poverty reduction programmes. Table 5 shows that the proportion of married respondents was high as they constituted 57% of 480 respondents. Findings from individual districts show that married respondents were many in Mvomero District as they constitute 56.2% followed by Rungwe and Bahi districts with 55% and 45%, respectively. These findings suggest that category of married respondent was the most participating group in TASAF projects as compared to other groups of marital status. The implication of these findings is that married respondents are many in TASAF projects, hence they poses better chances to benefit more than other groups of marital status.

Table 5: Distribution of Respondents by Marital Status and Districts.

Marital Status	Districts						Total	
	Bahi		Mvomero		Rungwe		Freq	%
	Freq	%	Freq	%	Freq	%		
Married	72	45	90	56.2	98	55	260	54.2
Divorced	43	26.8	35	21.9	33	20.6	111	23.2
Widow	10	5.6	10	6.3	10	6.3	30	6.2
Never Married	25	15.6	25	15.6	29	18.1	79	16.4
Total	160	100	160	100	160	100	480	100

4.1.4 Distribution of Respondents by Education and District

The study analyzed respondent's characteristics in terms of their education. Table 6 reveals that the proportion of respondents with primary education in the three districts is high (64%) as compared to other groups. Rungwe District has high number of respondents with secondary education (22.6%), followed by Mvomero District (11.4%). Bahi District is the last in the category of secondary education (6.3%). The implication of these findings is that Rungwe has high number of educated people as compared to Mvomero and Bahi districts. In most cases, education stands as a good predictor of development (Khan, 2014). This situation is similar to the findings of this study which show that Rungwe District has higher levels of participation in poverty reduction programmes than Mvomero and Bahi districts due to differentials in the level of education.

Table 6: Distribution of Respondents by Education and Districts

Education	Districts						Total	
	Bahi		Mvomero		Rungwe		Freq	%
	Freq	%	Freq	%	Freq	%		
Not attended formal education	40	25	33	20.6	30	18.7	103	21.4
Primary education	102	63.7	102	63.7	67	43.7	271	56.4
Secondary education	10	6.3	13	11.4	36	22.6	59	12.2
Post sec education	8	5	15	8.3	24	15	47	9.7
Total	160	100	160	100	160	100	480	100

4.1.5 Distribution of Respondents by Income and District

The study considered that, income differences among districts is one of the strong characteristics which could be responsible for spatial diversity of participation and poverty reduction. In this regard, this study analyzed distribution respondents by incomes and their respective districts so as expose respondents' income difference within three districts. Table 7 shows that among the three districts, Rungwe District ranked first with 7.5% proportion of respondents with highest income (TZs 500 000 and above followed by Mvomero District with 5.6% of respondents with highest income. The lowest is Bahi District with only 1.2 % of proportion of respondent's with highest income. On the other hand Bahi District has larger proportion (16.9%) of respondent's with lowest income followed with Mvomero and Rungwe districts which have 12.6% and 11.3%, respectively. The implication of these findings is that Rungwe District which has many respondents with relative highest income poses better chance to participate in poverty reduction programmes than Mvomero and Bahi districts. These findings support study by Runguma (2014) which mentioned household income as one of significant determinants of participation.

Table 7: Distribution of Respondents by Income and Districts

Income categories	Districts						Total	
	Bahi		Mvomero		Rungwe		Freq	(%)
	Freq	(%)	Freq	(%)	Freq	(%)		
Lowest income	27	16.9	20	12.6	18	11.3	65	13.5
Low income	41	25.6	41	25.6	41	25.6	123	25.6
Medium income	57	35.6	57	35.6	57	35.6	171	35.6
High income	33	20.6	33	20.6	32	20.5	98	20.4
Highest income	2	1.2	9	5.6	12	7.5	23	4.7
Total	160	100	160	100	160	100	480	100

*Income categories in TZs: Lowest income (100 000-200 000/=), low income (200 001-500 000/=), medium income (500 001-2 000 000/=), high income (2 000 001-5 000 000/=) and highest income (5 000 001 and above).

4.1.6 Distribution of Respondents by Household Size and District

There is considerable evidence that household size has a positive influence on household participation in poverty reduction programmes (Botlhoko and Oladele, 2013). In this view, the study intended to observe if there is variation of household size of respondents by districts so as to conduct further analysis of the influence household size has on spatial diversity of a households' participation in poverty reduction programmes. Table 8 shows that Rungwe District had 0.6% of respondents with highest household size while Mvomero and Bahi districts with 1.2% and 2.5% respectively. These findings suggest that households in Rungwe District have low number of household with largest sizes, followed by Mvomero and Bahi districts. The implication of these results is that since Rungwe District has few households with larger sizes then, it also featured by more capacity to participate in development projects than those in Bahi and Mvomero districts. This is due to the fact that few number of large household size reduces households' costs of living and may allow family labour to be highly utilized for engagement in development activities. This fact supports findings by Clausen (2007) which observed that households with lower size in Philippines are relatively richer than those with high number of household members.

Table 8: Distribution of Respondents by Household Size and Districts

Household size categories	Bahi		Districts		Rungwe		Total	
	Freq	(%)	Freq	(%)	Freq	(%)	Freq	(%)
Low size	64	40	64	40	64	40	192	40.8
Medium size	64	40	68	42.6	72	45	204	42.6
High size	28	17.5	25	16.2	23	14.4	76	15.0
Highest size	4	2.5	2	1.2	2	0.6	8	1.6
Total	160	100	160	100	160	100	480	100

* Household size categories: Low size =1-3, Medium size=4-7, High size=8-12and Highest

size=13

4.1.7 Distribution respondents by Main Occupation and District

Occupational structure of people is one of the significant determinants of spatial diversity in socio-economic development. Table 9 shows that farming is the dominant group among other occupations as it constitutes 73% out of 480 respondents from all three districts. The percentage of farmers in Bahi District is 78.1%, followed by Mvomero and Rungwe districts which have 71.8 % each. These findings depict the fact farmers group is the dominant participating group in TASAF projects. This could be true due to the fact that most of selected projects in three districts were farming and livestock based projects. The selected projects in all three districts were: Oxen project and Milk cow projects in Lukali and Chipanga-A villages respectively, both from Bahi District. Mvomero District has Dairy goats' projects in both Nyandira and Kichangani villages. The last group was that from Rungwe District which involved poultry keeping project in Kifunda and Pig keeping in Ibumba village. These findings imply that, farmers are the dominant group participating in rural based poverty reduction programmes, hence their chance to reduce poverty could be relatively higher compared to other occupations based in rural areas. This is due to the fact that farmers enjoy many of interventions directed to rural areas than other occupational groups (Runguma, 2014).

Table 9: Distribution of respondents by Main Occupation and Districts

Occupation	Districts						Total	
	Bahi		Mvomero		Rungwe		Freq	%
	Freq	(%)	Freq	(%)	Freq	(%)		
Housework	1	0.6	1	0.6	1	0.6	4	0.8
Farmers	125	78.1	115	71.8	115	71.8	355	73.9
Small business	21	13.1	29	13.3	24.3	5.6	74.3	15.4
Self employed	10	6.2	6	3.7	10	2.5	26	5.4
Salaried worker	2	1.3	4	2.5	9	3.1	15	3.1
Medium Entrepreneur	1	0.6	5	3.1	7	0.8	13	2.7
Total	160	100	160	100	160	33.3	480	100

4.1.8 Distribution of Respondents by Location of the Household and District

The study observed the location of the household and their effects on households' participation in poverty reduction programmes. This is due to the fact that location of the household gives an indication of the distance that programme participants or beneficiaries have to travel to access programme services and information. This study considered rural center as the centre of development in rural areas. This definition of rural center is also supported by Chaminuka *et al.* (2008). Therefore, settlements located in the rural centres have better chances to access program service and information; thus, enhance their participation than households which located out of rural centres. Table 10 shows that majority of the respondents were drawn from rural centre with Mvomero District accounting 80% of households, followed by Rungwe District with 75% while the last was Bahi District has 73.1%. The implication of these findings is that Mvomero District may have many households participating in poverty reduction programmes since it has majority (80%) of the respondents reside within rural centres as compared to Bahi and Rungwe Districts.

Table 10: Distribution of Respondents by Location of Household and Districts

Location	Districts						Total	
	Bahi		Mvomero		Rungwe		Freq	(%)
	Freq	(%)	Freq	(%)	Freq	(%)	Freq	(%)
Rural Centre	117	73.125	128	80	120	75	365	76.0
Rural settlement	29	18.125	20	12.5	27	16.875	76	15.8
Interior Rural	14	8.75	12	7.5	13	8.125	39	8.2
Total	160	33.3	160	100	160	100	480	100

4.2 Validity and Reliability of Instruments

Validity of instruments is process intending to assure that data to be collected provide meaningful results while reliability assesses the consistency of findings (Bowen *et al* (2009) and Runkel *et al.* (2007).

4.2.1 Validity of the Scale of Measurements

This part presents the study assessment of validity of scales used to measure data. Concurrent validity was computed using ANOVA with Friedman Test. Table 11 shows results of Friedman-test that validate the scale (0-4) used to measure participation levels. The results were significant at 0.037. The implication of the finding is that the scale used to measure data was valid and able to produce relevant results.

Table 11: ANOVA with Friedman's Test of Validity of Scale of Measurement

		Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig
Between People		844.400	479	1.763		
Within People	Between Items	.267 ^a	1	.267	.204	0.037
	Residual	626.733	479	1.308		
	Total	627.000	480	1.306		
Total		1471.400	959	1.534		
Grand Mean = 2.03						

4.2.2 Reliability of the Scale of Measurements

This part presents the study assessment of reliability of scales used in this study. The Cronbach's Alpha test was used to measure reliability. The result from Table 12 shows standardized value of Cronobach Alpha 0.953. This implies that responses given by respondents were much consistent by 0.953.

Table 12: Cronbach Alpha test of Reliability of Scales of Measurement.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
0.778	0.953	36

4.3 Levels of Spatial Diversity of Households' Participation in Poverty Reduction Programmes in the Study Area.

This part provides results and discussion of objective one which intended to identify levels of household participation in poverty reduction programmes. The idea behind this objective was to verify if there is spatial diversity of household participation in poverty reduction programmes. The level of participation was measured by looking on households' cash, material or labour contribution to the project. In order to have standard measure material and labour contributions were converted into cash contribution.

The study used the box plot to show how districts differ in participation levels in terms of variations of their interquartile range. The ranges are in TZs (000 000). In a box plot, the interquartile range is represented by the width of the boxes. Fig 5 shows that Rungwe District has a high level of households' participation in poverty reduction programmes as with mean scores 2.46. It is followed by Mvomero District which has mean scores 2.00 of households' participation level. Bahi district is the lowest in participation as it recorded with 1.97 mean scores. The results of median (middle value) show that Rungwe District is 3, while Mvomero and Bahi Districts have similar median values denoted at 2. These results provide evidence that levels of households' participation in development programmes differ among three districts, except when median values of Mvomero and Bahi Districts are compared. Therefore these findings suggest that poverty reduction programmes need to take into account possibilities of having spatial differences of

households' response when designing their development programmes. This observation is crucial when spatial differential in households' participation realizes direct influences on poverty reduction programmes. These findings are consistent with findings by Muhammad *et al.* (2011) and Schroeder (2006) who admit persistence of differences of levels of beneficiaries' participation in development projects.

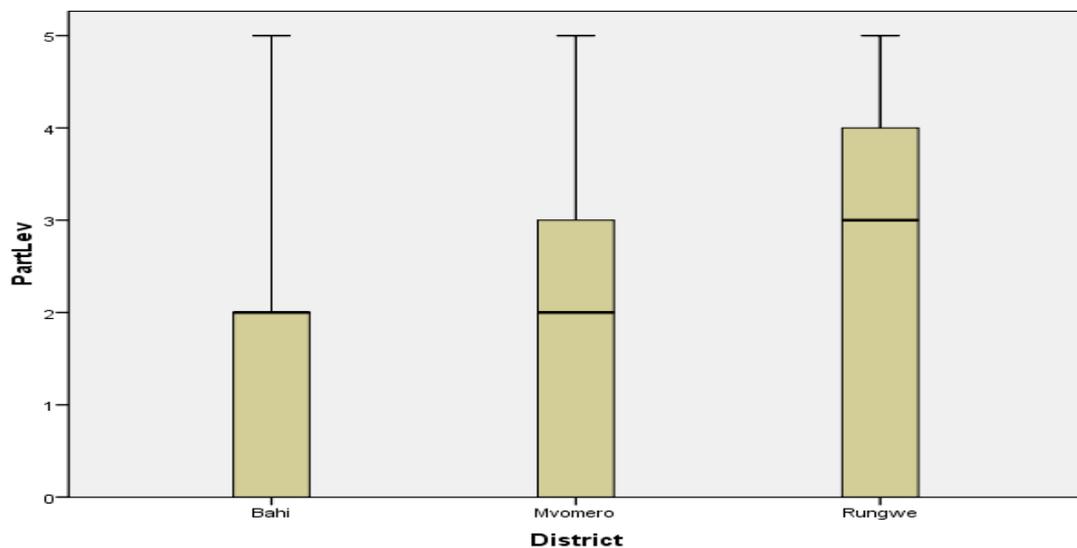


Figure 5: Levels of Households' Participation in Poverty Reduction Programmes.

4.4 Spatial diversity of Household Participation in Poverty Reduction Programmes in the Study Area

This part concentrated on the analysis of Objective Two. This objective examined spatial diversity of household participation in poverty reduction programmes so as to explore if there are district and/or village differences in relation to households' participation in poverty reduction programmes. The motivation behind this objective is that the analysis of variations of levels of households' participation in poverty reduction programmes within sampled districts and villages will lead the study to know if district and/or villages need

different approach and efforts enhancement of equality of household participation in poverty reduction programmes.

The analysis of spatial diversity of levels of household participation in poverty reduction programmes was guided by general null hypothesis (H_0) There are equal levels of households' participation in poverty reduction programmes in the study area (districts/villages).

In order to have clear results this hypothesis was divided into the following three hypotheses.

- (i) H_0 = villages of the same district have equal levels of households' participation in poverty reduction programmes.
- (ii) H_0 = villages of different districts have equal levels of households' participation in poverty reduction programmes.
- (iii) H_0 = there are equal levels of households' participation in poverty reduction programmes in the study districts.

4.4.1. Spatial Diversity of Households' Participation in Poverty Reduction Programmes by Villages

This part measured spatial diversity of households' participation in poverty reduction programmes by villages and within the same districts. The idea behind this test was to verify if there were significant variations in terms of households' participation in poverty reduction programmes in villages from the same district or from different districts.

4.4.1.1 Diversity of Villages of the same District in Households' Participation in Poverty Reduction Programmes

This analysis intended to assess whether households' participation in poverty reduction programmes have significant variation when villages of the same district are compared. The ANOVA results in Table 13 show that villages of the same districts do not have significant variation at $p < 0.05$. These results mean that the null hypothesis villages of the same district have equal levels of households' participation in poverty reduction programmes is not rejected. Therefore, these results suggest that households from villages in the same district have similar level of participation. Thus in many cases interventions made in villages of the same district with same level of participation must be granted similar intervention package. This observation supported findings by Muhammad (2013) which sees most of villages in Nigeria to have similar conditions for setting up participatory programmes.

Table 13: ANOVA of households' participation in poverty reduction programmes by villages of the same districts

Villages	Participation	Sum of Squares	df	Mean Square	F	Sig.
Villages	Between Groups	95.892	5	17.178	7.352	0.060*
	Within Groups	1107.575	474	2.337		
	Total	1193.467	479			

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.4.1.2 Diversity of Households' Participation in Poverty Reduction Programmes by villages of Different Districts

This analysis was guided by the null hypothesis (H_0) which state that, there are equal levels of households' participation in poverty reduction programmes in villages from different districts.

Again, the study used ANOVA to test if there were variations of households' participation in poverty reduction programmes in the villages surveyed from different districts. The results in Table 14 show that there is no significant variation on households' participation in poverty reduction programmes among villages from different districts at $p=0.063$. These results imply that the null hypothesis which asserts villages from different districts have equal levels of households' participation in poverty reduction programmes is not rejected. These findings proved that spatial diversity of households' participation in poverty reduction programmes is not significant at the village level even if data are drawn from different districts. The implication of these results is that policy or programme interventions to address households' participation in poverty reduction, across villages of the same district are required to adopt a similar strategy as villages' participation levels do not differ significantly. Thus, there is no a need of different approaches towards enhancement of equality of households' participation under such situation. This means participation variations were observed to differ much when larger number of households are beyond that of village population.

These results supports findings by Runguma (2014) which show that village participation levels in developing countries have considerable low differences due to common governance structures. The classical example for such structure is Tanzania were villages are formed by minimum household size of 250 households, village assembly and village

council. These structure posses commonalities features which shape villages with common household characteristics.

Table 14: ANOVA of Households' Participation in Poverty Reduction Programmes by Villages of Different Districts

Villages	Participation	Sum of Square	df	Mean Square	F	Sig.
Villages	Between Groups	85.892	5	17.178	7.352	.083*
	Within Groups	1107.575	474	2.337		
	Total	1193.467	479			

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.4.2 Diversity Households' Participation in Poverty Reduction Programmes by Districts

This part measured diversity households' participation in poverty reduction programmes across districts. The inspiration behind this test was to check if there were significant variations in relation to households' participation in poverty reduction programmes across districts. This analysis was guided by null hypothesis (H_0) which states that, there are equal levels of households' participation in poverty reduction programmes among three districts. The study used ANOVA) to test if there is a significant variation of households' participation in development programme between districts. In this case districts were considered as factors and participation level as dependent variable. Results in Table 15 show that districts differ significantly at $p = 0.000$ in terms of their levels of household participations in poverty reduction programmes. These results mean that districts' differences on levels of households' participation in developments programmes are significant and thus, the null hypothesis which asserted that there are equal levels of households' participation in poverty reduction programmes among three districts is rejected. The findings suggest that the spatial diversity of households' participation in poverty reduction programmes exist in three districts. However, since ANOVA test is an

OMNIBUS test that does not tell which districts are different then there is a need to do Post Hoc test to be able to identify which districts among the three districts differs significantly.

Table 15: ANOVA of Households' Participation in Poverty Reduction Programmes by Districts

Districts	Participation	Sum of Squares	df	Mean Square	F	Sig.
Districts	Between Groups	82.279	2	41.140	17.660	.000***
	Within Groups	1111.188	477	2.330		
	Total	1193.467	479			

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

Following results of analysis of ANOVA in Tables 13, 14 and 15 it is clear that only districts are significantly varying in terms of household participation in poverty reduction programmes. For this case it was necessary to conduct Post Hoc tests to be able to determine which among the three districts have meaningful differences. Post Hoc is pair wise measure which compares how far each of the three districts differs from others in the same group (Lynch, *et al.*, 2014). The Post Hoc test presented in Table 16 revealed that all three districts (i.e Bahi, Mvomero and Rungwe) differ significantly at $p < 0.05$ in terms of households' participation in poverty reduction programmes. These results suggest that any interventions to deal with households' participation must consider district differences in terms of households' participation in development programs. These findings support study by Kwigizile, (2007) which shows variation of household's participation in national poverty reduction strategies in Tanzania. Physical factors such as: distance to the project area, availability of land resources, access to water and other physical assets are linked with spatial variation of households' participation in poverty reduction programmes (Runguma 2014; Lederman, 2001).

Table 16: Post Hoc Analysis of District Spatial Diversity of Household Participation

(I) District	(J) District	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Bahi	Mvomero	-.556*	.153	.001***	-.92	-.19
	Rungwe	-1.012*	.168	.000***	-1.42	-.61
Mvomero	Bahi	.556*	.153	.001***	.19	.92
	Rungwe	-.456*	.189	.048*	-.91	.00
Rungwe	Bahi	1.012*	.168	.000***	.61	1.42
	Mvomero	.456*	.189	.048*	.00	.91

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.5 Factors Influencing Spatial Diversity with regards to Household Participation in Poverty Reduction Programmes

This part provides analysis of Objective Three which intended to identify factors influencing spatial diversity of household participation in poverty reduction programmes. The motive behind this objective was to expose factors which influence spatial diversity of households' participation in poverty reduction programmes so as to show factors which need to be given special attention when addressing the problem of spatial diversity of households' in poverty reduction programmes across districts.

The analysis of objective three was guided by test of three general hypotheses. These are

- (i) H_0 = there are no differences of socio-economic factors (x_1) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (ii) H_0 = there are no differences of service factors (x_2) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (iii) H_0 = there are no differences of physical factors (x_3) in influencing spatial diversity of households' participation in poverty reduction programmes.

Based on above three hypotheses, the study has divided the analysis of Objective Three into three groups of factors namely: socio-economic factors, service factors and physical factors. Later each of three groups was divided into individual attribute hypotheses.

4.5.1 Socio-economic Factors Influencing spatial Diversity of Households' Participation in Poverty Reduction Programmes

This analysis was carried out so that to identify socio-economic factors which influence spatial diversity of households' participation in poverty reduction programmes. This analysis was guided by general the null hypothesis (H_0) "there are no differences of socio-economic factors (x_i) in influencing spatial diversity of households' participation in poverty reduction programmes". The grouped socio-economic factors included were; age, gender, marital status, education, income, occupation of the head of household and location of household. However, in order to assure clarity on the test of this hypothesis each socio-economic attribute was guided by the following hypotheses;

- (i) H_0 = there is no difference of education (x_1) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (ii) H_0 = there is no difference of income (x_2) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (iii) H_0 = there is no difference of household size (x_3) in influencing spatial diversity of households participation in poverty reduction programmes.
- (iv) H_0 = there are no differences of gender (x_4) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (v) H_0 = there is no difference of age (x_5) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (vi) H_0 = there is no difference of marital status (x_6) in influencing spatial diversity of households' participation in poverty reduction programmes.

- (vii) H_0 = there is no difference of occupation (x_8) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (viii) H_0 = there is no difference of location of household (x_9) in influencing spatial diversity of households' participation in poverty reduction programmes.

4.5.1.1 Variation of Socio-economic Factors Across Districts

This part presents analysis of variation of socio-economic factors across districts. The reason for this analysis was to prove if there were any variations of socio-economic factors between selected districts. The logic behind is that, districts' variations on socio-economic factors require different treatments or strategies in terms of factors proved to vary significantly. Thus, if socio-economic factors vary significantly, then there must be differently use of socio-economic factors among sampled district to address such factors from one district to another. The study used ANOVA test for district variations in terms of selected socio-economic factors.

Results in Table 15 indicate that among 8 socio-economic factors (age, gender, marital status, education, income, occupation of the head of household and location of household) only income, education and household size showed significantly variations across three districts (Bahi, Mvomero and Rungwe districts) at $p < 0.05$. Based on these results, the null hypotheses a, b and c which states that, there are no differences of education, incomes and household size, respectively (x_i) in influencing spatial diversity of households' participation in poverty reduction programmes are rejected. On the other hand hypotheses X_1 , X_5 , X_6 , X_7 , and X_8 which states that, there are no differences of gender, age, marital status occupation of household and location of household, respectively (x_i) in influencing spatial diversity of households' participation in poverty reduction programmes are not rejected. These results imply that socio-economic factors i.e education, income and

household size vary significant across districts, thus any attempt to address income, education and household size require different level of efforts and approaches. These findings support a study by Botlhoko and Oladele (2013) which showed significant variations of household size in South African districts. They are also compatible with findings by Khan (2008) who admits that Northwest Pakistan districts have significant variations in terms of household income and education.

Based on the ANOVA results in Table 18 it is apparent that districts have significant variation in terms of socio-economic factors. According to ANOVA to results, socio-economic factors which vary significantly were; education, income and household size, however ANOVA test have not achieved to show districts which differs significantly. Therefore, Post Hoc test was carried out so as to make comparison among districts which vary significantly. Post hoc test depicted a clear picture of districts which vary significantly with regard to education, income and household size factors. The discussion on such results is made under the following subsections.

Table 17: ANOVA of Socio-economic Factors Across Districts

		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	.179	2	.090	.367	.693
	Within Groups	116.488	477	.244		
	Total	116.667	479			
Age	Between Groups	.929	2	.465	.426	.654
	Within Groups	520.719	477	1.092		
	Total	521.648	479			
Marital	Between Groups	2.004	2	1.002	.830	.437
	Within Groups	576.194	477	1.208		
	Total	578.198	479			
Education	Between Groups	3.954	2	1.977	5.072	.007**
	Within Groups	185.944	477	.390		
	Total	189.898	479			
Income	Between Groups	160.704	2	80.352	98.455	.000***
	Within Groups	389.294	477	.816		
	Total	549.998	479			
Household size	Between Groups	16.404	2	8.202	14.239	.000***
	Within Groups	274.762	477	.576		
	Total	291.167	479			
Occupation of household	Between Groups	4.200	2	2.100	2.151	.118
	Within Groups	465.725	477	.976		
	Total	469.925	479			
Location of household	Between Groups	1.463	2	.731	2.142	.119
	Within Groups	162.869	477	.341		
	Total	164.331	479			

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

(i) Education

Results in Table 18 show that education levels vary significantly between Rungwe and Bahi districts at $p < 0.05$. There are no education variations between Rungwe and Mvomero districts. Also there is no education variation between Bahi and Mvomero districts. These results suggest that, attempts to address household participation in poverty reduction programmes and using education factor in Bahi and Rungwe districts must adopt different strategies. This is due to the fact that Bahi and Rungwe districts have significant variations in education levels. On the other hand aspects of education between Mvomero and Rungwe districts or between Bahi and Mvomero districts, thus attempt to influence

household participation in poverty reduction programmes must take similar strategy since these districts have insignificant differences in education levels.

(ii) Income

In order to address the observed household income variation among the districts may require different strategies. Results in Table 16 show that household income variations are significant in all the three districts. It shows that income variation in Rungwe and Bahi districts is significant at $p < 0.000$. Income variation between Rungwe and Mvomero districts is significant at $p < 0.000$. Likewise, income variation between Bahi and Mvomero districts is significant at $p < 0.000$. These results suggest that any initiatives to influence households' participation in poverty reduction programmes using income factor must take different strategies among the three districts. This is due to the fact that income varies significantly among all the three districts.

(iii) Household size

Results in Table 18 show that household size varies significantly between Rungwe and Bahi districts at $p < 0.05$. There are no observed household size variations between Rungwe and Mvomero districts. On the other hand, results in Table 18 show that there is no household size difference between Bahi and Mvomero districts. These results prove that Rungwe and Bahi districts need different strategies when it comes to determining household sizes in household's participation in poverty reduction programmes. Such results imply that Rungwe and Mvomero districts need a similar strategy in addressing household size. They also mean that Mvomero and Bahi districts need a similar strategy in addressing household size as a factor for influencing households' participation in poverty reduction programmes.

Table 18: Post Hoc Test of Variation of socio-economic Factors Across Districts

Attributes	(I) District	(J) District	Mean Difference		Sig.	95% Confidence Interval	
			(I-J)	Std. Error		Lower Bound	Upper Bound
Education	Bahi	Mvomero	-.144	.070	.100	-.31	.02
		Rungwe	-.219*	.070	.005**	-.38	-.05
	Mvomero	Bahi	.144	.070	.100	-.02	.31
		Rungwe	-.075	.070	.530	-.24	.09
	Rungwe	Bahi	.219*	.070	.005**	.05	.38
		Mvomero	.075	.070	.530	-.09	.24
Income	Bahi	Mvomero	-.856*	.101	.000***	-1.09	-.62
		Rungwe	-1.406*	.101	.000***	-1.64	-1.17
	Mvomero	Bahi	.856*	.101	.000***	.62	1.09
		Rungwe	-.550*	.101	.000***	-.79	-.31
	Rungwe	Bahi	1.406*	.101	.000***	1.17	1.64
		Mvomero	.550*	.101	.000***	.31	.79
Household size	Bahi	Mvomero	.181	.085	.084**	-.02	.38
		Rungwe	-.269*	.085	.005**	-.47	-.07
	Mvomero	Bahi	-.181	.085	.084**	-.38	.02
		Rungwe	-.450*	.085	.000***	-.65	-.25
	Rungwe	Bahi	.269*	.085	.005**	.07	.47
		Mvomero	.450*	.085	.000***	.25	.65

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.5.2 Service Factors Influencing Spatial Diversity of Households' Participation in Poverty Reduction Programmes

This part presents analysis of variation of service factors across districts. Service is the group of factors which coined service in one group. Service factors refer to selected items which represents access and materials owned by households. These include: ownership of; house, bicycle, cattle and goats. These services were considered to be important factors influencing household participation since they play a crucial role in building a households' ability to participate in economic activities. The assumption is that households' ownership and access to such services and material would reduce cost of living such as house rent, transport cost, income from cattle and goats to the respective household, thus paving a room for that household to participate in other development activities. On the other hand, service factors included: access to; water, health, food and primary education. Again these

service factors were assumed to be important in influencing households' participation in poverty reduction programmes as their access may reduce households' costs hence provide room for a household to participate in other poverty reduction programmes.

The motive of this analysis was to verify if there are variations of Service factors within Bahi, Mvomero and Rungwe districts. This means that districts which vary significantly in terms of service factors will have different influences on household's participation in poverty reduction programmes. Thus, such districts may require different approaches when using services factors to address households' participation in poverty reduction programmes. Therefore, hypotheses for each service attributes were as follows:

- (i) H_0 = there is no difference of access to food (x_9) in influencing spatial diversity on households' participation in poverty reduction programmes.
- (ii) H_0 = there is no differences of access to water (x_{10}) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (iii) H_0 = there is no difference of access to health services household size (x_{11}) in influencing spatial diversity on households' participation in poverty reduction programmes.
- (iv) H_0 = there is no difference of access to primary education (x_{12}) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (v) H_0 = there are no difference of ownership of house (x_{13}) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (vi) H_0 = there is no difference of ownership of bicycle (x_{14}) in influencing spatial diversity of households participation in poverty reduction programmes.
- (vii) H_0 = there are no difference of ownership of cattle (x_{15}) in influencing spatial diversity of households' participation in poverty reduction programmes.

- (viii) H_0 = there is no difference of ownership of goats (x_{16}) in influencing spatial diversity of households' participation in poverty reduction programmes.

4.5.2.1 Variation of Service Factors Across Districts

The analysis of variation of service factors across district was guided by a general null hypothesis (H_0) which asserts that there are no differences of service factors (x_2) in influencing spatial diversity in relation to household participation in poverty reduction programmes. In order to ensure clarity in testing of hypothesis, each of the attribute was tested accordingly. Results in Table 19 show that among the eight service factors; access to food, access to water, access health and access to primary education have shown significant ($p < 0.05$) variations across districts. Therefore, these results imply that the null hypotheses (H_0) that, there are no differences in: access to food, access to water and access to primary education (hypotheses X_9 , X_{10} , X_{11} , and X_{12}) in influencing spatial diversity on household participation in poverty reduction programmes is rejected. On the other hand hypotheses (X_5 , X_6 , X_7 , X_8 and X_{13}) which state that there are no differences ownership of; house, cattle, goats and bicycles in influencing spatial diversity on household participation in poverty reduction programmes are not rejected. The meaning of these findings is that access to water, food, health services and primary education have a significant variation in influencing households' participation in poverty reduction programmes, thus they need to be treated differently when addressed within the specified districts. These results support findings by Kidanemariam *et al.* (2010) who indicated that: access to; food, health services, water and education tend to vary significantly in most of districts in developing countries and have critical influences on households' participation in development activities.

Table 19: ANOVA of Service factors across districts

		Sum of Squares	df	Mean Square	F	Sig.
Ownership of House	Between Groups	.000	2	.000	.000	1.000
	Within Groups	523.139	471	1.111		
	Total	523.139	473			
Ownership of Bicycle	Between Groups	.000	2	.000		.999
	Within Groups	523.139	477	.1.211		
	Total	523.139	479			
Ownership of Cattle	Between Groups	.038	2	.019	.008	.992
	Within Groups	1077.544	477	2.259		
	Total	1077.581	479			
Ownership of Goats	Between Groups	.000	2	.000	.000	1.000
	Within Groups	1190.127	471	2.527		
	Total	1190.127	473			
Access to Food	Between Groups	39.204	2	19.602	232.628	.000***
	Within Groups	40.194	477	.084		
	Total	79.398	479			
Access to Water	Between Groups	80.317	2	40.158	9.300	.000***
	Within Groups	2059.675	477	4.318		
	Total	2139.992	479			
Access to Health	Between Groups	47.704	2	23.852	233.653	.000***
	Within Groups	48.694	477	.102		
	Total	96.398	479			
Access to Primary Education	Between Groups	27.276	2	13.638	41.130	.000***
	Within Groups	158.165	477	.332		
	Total	185.441	479			

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

Basically, ANOVA results in Table 19 show that, districts varied significant in terms of access to food, water, health service and primary education. However the ANOVA test is limited at exposing existence of variation. It has not shown exactly, districts which differ significantly. Therefore a Post Hoc test was carried out so as to expose exact districts vary significant in terms of access to; food, water, health service and primary education. The discussion of the Post Hoc results is presented in subsections hereunder.

(i) Access to Food

Access to food is presumed to be important when addressing households' participation in poverty reduction programmes. The rationale for access to food is that households would have reduced time and resource they required to spend on food and direct such resources and time in poverty reduction programmes.

Results in Table 20 indicate that among the three districts only Rungwe and Bahi districts differed significantly ($p < 0.05$) in terms of access to food. When Bahi and Mvomero districts are compared, the difference is not significant in terms of access to food. A comparison of access to food between Rungwe and Mvomero districts showed insignificant variation. These results imply that, Rungwe and Bahi districts have notable differences in terms of access to food. There are no notable differences when Bahi district is compared with Mvomero district or when Mvomero district is compared with Rungwe district. Statistics from National Food Security and Vulnerability Survey shows that Rungwe district has more access to food than Bahi district (URT, 2013). These imply that if people would not access adequate food, they ability to participate in other poverty reduction programmes would be compromised. This is due to the fact that people will tend to engage in fully in searching for food so as to ensure their survival (URT, 2015). The implication of these findings is that, when designing and implementing interventions of households' participation in poverty reduction programmes with consideration of aspects of access to food, Bahi and Rungwe districts require different strategies.

(ii) Access to Water

The study wanted to prove the assumptions that to access water services have influence on household participation in poverty reduction programmes. The premise behind this assumption that, access to water services is associated with both time and finance. If water

is easily accessible then it reduces time and finance spent to fetch water. The saved time and finance can be devoted to households' participation in poverty reduction programmes. Results in Table 20 indicate that Rungwe and Bahi districts vary significantly ($p < 0.05$) in terms of access to water. There is no significant variation on access to water between Bahi and Mvomero. The comparison of access to water between Rungwe and Mvomero districts showed significant ($p < 0.05$) variation. These results mean districts differ significantly in terms of their access to water, except when Bahi and Mvomero are compared. The implication of these results is that, when intervening to promote household's participation in poverty reduction programmes, access to water is a prerequisite. However, Bahi and Rungwe Districts will require different strategies in addressing problem of water. When programme will include Rungwe and Mvomero Districts, there will a need to adopt different strategies. However we may need analogous strategies, when we set interventions between Bahi and Mvomero districts. These results support findings by Aref and Redzuan (2009) who admit the need for similar interventions in districts which have similar levels of services.

(iii) Access to Health Services

The study considered access to health service as one of important attributes towards promotion of households' participation in poverty reduction programmes. The assumption being that more access to health my reduce finance and time spent on fetching for health service. Thus, the saved time and money may be devoted in household's participation in poverty reduction programmes. Results in Table 20 show that Rungwe and Bahi districts differ significantly ($p < 0.05$) in terms of access to health services. Bahi and Mvomero districts have shown non significant variation on access to health services. Assessment between Rungwe and Mvomero districts have shown significant ($p < 0.05$) differences in access to health services. Again these results mean that all the three districts differ

significantly in terms of their access to health services, except when Bahi and Mvomero are compared. The implication of these results is that, when designing and implementing interventions of household's participation in poverty reduction programmes with consideration of access to health services between Bahi and Rungwe districts requires different strategies are required. Between Mvomero and Rungwe districts different strategies are also required. But similar efforts are needed when planning to address access to health services between Mvomero and Bahi districts.

(iv) Access to Primary Education

Education builds capacity of household to engage in development activities. Thus, access to education widens the room for household to participate in poverty reduction programmes. Analysis of access to educations on Table 20 shows that Rungwe and Bahi districts differ significantly ($p < 0.05$) in terms of access to primary education. Comparison between Bahi and Mvomero districts has shown non significant variation on access to primary education. Comparison between Rungwe and Mvomero districts have shown significant ($p < 0.05$) differences in access to primary education. These results connote that the two districts differ significantly in terms of their access to primary education. The implication of these results is that, when designing and implementing interventions of household's participation in poverty reduction programmes with consideration of access to primary education between Bahi and Rungwe districts different strategies are required. Between Mvomero and Rungwe districts different strategies are also required. But similar efforts are needed when planning to address access to primary education between Mvomero and Bahi districts.

Table 20: Post Hoc test of Variation of Service Factors Across Districts

Dependent Variable	(I) District	(J) District	Mean Difference (I-J)			95% Confidence Interval	
			Mean	Std. Error	Sig.	Lower Bound	Upper Bound
Access to Food	Bahi	Mvomero	.000	.032	1.000	-.08	.08
		Rungwe	-.606*	.032	.000***	-.68	-.53
	Mvomero	Bahi	.000	.032	1.000	-.08	.08
		Rungwe	-.606*	.032	.000***	-.68	-.53
	Rungwe	Bahi	.606*	.032	.000***	.53	.68
		Mvomero	.606*	.032	.000***	.53	.68
Access to Water	Bahi	Mvomero	-.288	.232	.432	-.83	.26
		Rungwe	-.975*	.232	.000***	-1.52	-.43
	Mvomero	Bahi	.288	.232	.432	-.26	.83
		Rungwe	-.688*	.232	.009**	-1.23	-.14
	Rungwe	Bahi	.975*	.232	.000**	.43	1.52
		Mvomero	.688*	.232	.009**	.14	1.23
Access to Health service	Bahi	Mvomero	.000	.036	1.000	-.08	.08
		Rungwe	-.669*	.036	.000***	-.75	-.58
	Mvomero	Bahi	.000	.036	1.000	-.08	.08
		Rungwe	-.669*	.036	.000***	-.75	-.58
	Rungwe	Bahi	.669*	.036	.000***	.58	.75
		Mvomero	.669*	.036	.000***	.58	.75
Access to Primary Education	Bahi	Mvomero	.031	.064	.878	-.12	.18
		Rungwe	-.489*	.064	.000***	-.64	-.34
	Mvomero	Bahi	-.031	.064	.878	-.18	.12
		Rungwe	-.521*	.064	.000***	-.67	-.37
	Rungwe	Bahi	.489*	.064	.000***	.34	.64
		Mvomero	.521*	.064	.000***	.37	.67

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.5.3 Physical Factors Influencing Spatial Diversity of Households' Participation in Poverty Reduction Programmes

The study made the analysis of physical factors in order to detect physical factors which influence spatial diversity of households' participation in poverty reduction programmes. Physical factors are referred as factors which originate from the area, geography or space (Venables, 2004). This analysis was guided by the null hypothesis (H_0) which states that, there are no differences of physical factors (x_3) in influencing spatial diversity of households' participation in poverty reduction programmes. The group physical factors included in this analysis were; agglomeration cost advantages, pasture, access to land,

climate and distance to the project area. However in order to assure clarity on the test of this hypothesis each spatial attribute was guided by the following hypotheses:

- (i) H_0 = there is no difference of agglomeration cost advantage (x_{17}) in influencing spatial diversity of households' participation in poverty reduction programmes
- (ii) H_0 = there is no difference of pasture (x_{18}) in influencing spatial diversity of households' participation in poverty reduction programmes
- (iii) H_0 = there is no difference of access to land (x_{19}) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (iv) H_0 = there is no difference of climate (x_{20}) in influencing spatial diversity of households' participation in poverty reduction programmes.
- (v) H_0 = there is no difference of distance to project area (x_{21}) in influencing spatial diversity of households' participation in poverty reduction programmes.

4.5.3.1 Variation of Physical Factors Across Districts

The study used ANOVA test to detect district variations in terms of the above selected physical factors. Results from the ANOVA test (Table 21) show that all selected spatial factors (agglomeration cost advantages, pasture, access to land, climate and distance to the project area do vary significantly ($p < 0.05$) among three districts. Therefore, based on the specific null hypotheses (H_0) which state that: there are no variation of agglomeration cost advantages, pasture, land resource, climate and distance to project area (hypotheses X_{17} , X_{18} , X_{19} , X_{20} , and X_{21}) in influencing spatial diversity of households' participation in poverty reduction programmes are rejected. The implication of these findings is that some districts may need different strategies or efforts when using these physical factors to address spatial diversity of households' participation in poverty reduction programmes.

Table 21: ANOVA Test of Spatial Factors Across Districts

		Sum of Squares	df	Mean Square	F	Sig.
Agglomeration cost advantages	Between Groups	8.404	2	4.202	5.959	.003**
	Within Groups	336.344	477	.705		
	Total	344.748	479			
Vegetation support to project	Between Groups	96.329	2	48.165	69.711	.000***
	Within Groups	329.569	477	.691		
	Total	425.898	479			
Land	Between Groups	31.650	2	15.825	40.334	.000***
	Within Groups	187.150	477	.392		
	Total	218.800	479			
Favouring Climate	Between Groups	1.162	2	.581	2.029	.033**
	Within Groups	136.669	477	.287		
	Total	137.831	479			
Distance to the project area	Between Groups	68.267	2	34.133	124.931	.000***
	Within Groups	130.325	477	.273		
	Total	198.592	479			

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

Ideally, ANOVA test in Table 19 is limited at showing existence of significant variation of spatial factors across districts. It does not show exactly which districts vary in terms of spatial factors. This part of analysis considers the use of Post Hoc test so as to clearly show which districts which vary significantly in terms of spatial factors namely; agglomeration cost advantages, vegetation support to projects, access to land resources, climate and distance to the project area. The discussion of Post Hoc results of individual spatial factors is presented under the following subsections.

(i) Agglomeration Cost Advantage

The study assessed how districts vary in terms of agglomeration cost advantage. Agglomeration cost advantages refer to advantages which households could enjoy after realizing lower transport costs and time spent to reach services which support project activities i.e agro-dealers, market services. This advantage is always possible when services are located in proximal points (Henderson, 2003; Venables, 2004). Results from Table 22 shows that Bahi and Mvomero districts differ significantly ($p < 0.05$) in terms of agglomeration cost advantage. This implies that the way Bahi District community featured with closeness of services was quite different from Mvomero community. Mvomero and Bahi districts have shown insignificant differences in terms of agglomeration cost advantages. Comparison of agglomeration cost advantage between Mvomero and Rungwe districts have shown significant ($p=0.0180$) variation. The implication of these results is that some districts have variation in concentration of firms and services. Therefore, any attempt to promote households' participation and link agglomeration cost advantage as one of the factors must not undermine district differences.

(ii) Pasture

The study sampled six (6) projects from six villages of which all of them were livestock based projects. Thus, the projects depend on the availability of favourable pasture and animal feeds. Lukali and Chipanga –A villages from Bahi District dealt with oxen project. Nyandira and Kichangani villages in Mvomero District dealt with dairy goat's project. On the side of Rungwe District, Ibuma village dealt with Pig project while Kifunda village dealt with Poultry project. In this regard, it was seen important to look if districts are featured with required pasture for livestock within villages. Therefore this analysis focused on the need to know how districts vary in terms of pasture. Findings in Table 22 show that each district differs from one another in terms of pasture. The implication of

these findings is that all the three districts have varying potentials in terms of pasture, thus they need different strategies when addressing issues related to pasture. These results are supported by the District profiles which show that Bahi District as a semi-arid with grassland supporting livestock keeping mainly cattle and goats. This is quite different from Rungwe district which has 44 square kilometers of forest not favourable for animal grazing. On the contrary, Mvomero is habited with tropical scattered grassland and livestock is not suitable although is heavily practised by migrating pastoralist (URT, 2010).

(iii) Land Resources

The study analyzed district variations in terms of land resource. Land resources considered under this study were: land for livestock keeping and grazing. Land resource was conceived as important in influencing decision of household to participate or not to participate since its availability influences household's participation in poverty reduction programmes since, access to land ensure area for grazing and livestock keeping. Results from Table 22 revealed that Bahi District differs significantly ($p < 0.05$) from Rungwe in terms of land potentials. Comparison between Bahi and Mvomero Districts shows non significant variation on access to land. Rungwe and Mvomero districts have significant ($p < 0.05$) variations. These results suggest that only Rungwe District differs from the other two districts in terms of access to land. These results are justified by the studies of Craig and Gordon (2001) and Nyunza and Mwakaje (2012) who altogether noted that Rungwe District is one of districts with high shortage of land for agriculture.

(iv) Favorable Climate

The study paid attention on the analysis of the district variations in terms of favour they enjoy from climate. The motive of this analysis was to assess how climate stand as influencing factor for households' participation in poverty reduction programmes and TASAF project activities in particular. Results in Table 22 show that each district varies significantly from the other in terms of the way they realize favour of climate in their project activities. These results suggest that Rungwe District has different climate advantages as compared to Bahi and Mvomero districts. It also means that Mvomero District's climate varies from Bahi District. These results are supported by districts' profiles which show that Bahi District has rainfall ranging from 500 mm to 650 mm per annum. It also experiences both high and low temperature. The highest temperature normally reaches 31⁰C while the lowest is 18⁰C. Rainfall in Mvomero District is of bimodal type with average rainfall amounting to 1200 mm per annum with variations from 800 mm to 2000 mm. On the other hand Rungwe District has an average rainfall range 900 mm in the lowlands to 3300 mm in the highlands (URT, 2013). These statistics imply that Rungwe District enjoys favourable rainfall suitable for livestock pasture and water followed by Mvomero District. Bahi District is more prone to drier climate conditions than the other two districts.

(v) Distance to the project area

The study focused on the analysis of district differences by the distance travelled by project's participants to reach project services. The idea behind this analysis was to assess the influences of distance on households' participation in poverty reduction programmes. Results in Table 22 show that there is significant ($p < 0.05$) variation in terms of distance which participants travel to the reach project offices. Comparison of distance travelled by beneficiaries varies significantly between Rungwe and Mvomero districts. There are no

significant differences between Mvomero and Bahi districts. These results suggest that when designing households' participation programmes and considering the location Rungwe District must be given a different strategy compared to that granted to Bahi and Mvomero districts. These findings reflect the differences noted between Rungwe and the other two districts (Bahi and Mvomero). Rungwe District TASAF project offices were closer than that of Mvomero and Bahi Districts. This findings support argument of Rnguma (2014) who noted that, genuine participation in the decision-making process requires appropriate avenues and comfortable distance, where citizens can interact with their leaders and other social actors in making development choices.

Table 22: Post Hoc Test of Variation of Spatial Factors Across Districts

Dependent Variable	(I) District	(J) District	Mean Difference			95% Confidence Interval	
			(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Agglomeration cost advantage	Bahi	Mvomero	-.300*	.094	.004**	-.52	-.08
		Rungwe	-.044	.094	.887	-.26	.18
	Mvomero	Bahi	.300*	.094	.004**	.08	.52
		Rungwe	.256*	.094	.018**	.04	.48
	Rungwe	Bahi	.044	.094	.887	-.18	.26
		Mvomero	-.256*	.094	.018**	-.48	-.04
Vegetation support to project	Bahi	Mvomero	-.769*	.093	.000***	-.99	-.55
		Rungwe	-1.062*	.093	.000***	-1.28	-.84
	Mvomero	Bahi	.769*	.093	.000***	.55	.99
		Rungwe	-.294*	.093	.005**	-.51	-.08
	Rungwe	Bahi	1.062*	.093	.000***	.84	1.28
		Mvomero	.294*	.093	.005**	.08	.51
Land resources	Bahi	Mvomero	.038	.070	.854	-.13	.20
		Rungwe	-.525*	.070	.000***	-.69	-.36
	Mvomero	Bahi	-.038	.070	.854	-.20	.13
		Rungwe	-.562*	.070	.000***	-.73	-.40
	Rungwe	Bahi	.525*	.070	.000***	.36	.69
		Mvomero	.562*	.070	.000***	.40	.73
Favorable Climate	Bahi	Mvomero	.112	.050	.146	.003	.25
		Rungwe	.019	.020	.947	.014	.16
	Mvomero	Bahi	.112	.050	.146	.003	.03
		Rungwe	.094	.030	.261	.012	.05
	Rungwe	Bahi	.019	.020	.947	.014	.12
		Mvomero	.094	.030	.261	.012	.23
Distance to the project area	Bahi	Mvomero	.000	.013	1.000	-.14	.14
		Rungwe	.800*	.058	.000***	-.94	-.66
	Mvomero	Bahi	.000	.013	1.000	-.14	.14
		Rungwe	-.800*	.053	.000***	-.94	-.66
	Rungwe	Bahi	.800*	.058	.000***	.66	.94
		Mvomero	.800*	.053	.000***	.66	.94

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.5.4 Factors Influencing Spatial Diversity of Household Participation in Poverty Reduction Programmes.

In spite of districts' similarities in terms of modalities for households' participation in TASAF projects, all the three districts differed in terms of levels of households' participation in TASAF projects. This study therefore, made efforts to identify and analyze the socio-economic, service and physical factors that influenced spatial diversity of household participation in poverty reduction programmes. The analysis of factors influencing spatial diversity of household participation in poverty reduction programmes was undertaken using sequential linear regression model. Results of the sequential linear regression are presented in Table 23 and discussion of three groups of factors namely: (i) socio-economic, (ii) services and (iii) physical factors is presented in the subsequent sections.

4.5.4.1 Socio-economic factors influencing spatial diversity of household participation in poverty reduction programmes.

The results from the Linear regression model (Table 23) show that the coefficients for 2 variables were significant, these are education with $t = 2.416$ and income with $t = 13.656$. The sign for each coefficient is consistent with the expectation; that is, the probability of households' participation in poverty reduction programmes increases if income increases. These results suggest that households with relatively higher income have good position to contribute in TASAF project, thus higher participation was the result.

Likewise households who have relatively higher education have tendency of adopting new ideas and interventions from poverty reduction programmes than those with low or not educated. Thus, education stand as active prerequisite in promoting households' participation in poverty reduction programmes.

Therefore in order to promote households' participation in poverty reduction programmes there is a need to ensure that household member's possess adequate education and income to allow their participation in poverty reduction programmes. These results support findings by Muhammad, *et al.* (2011), and Lederman (2001) who approved the influence of education of education and income on household participation in poverty reduction interventions.

4.5.4.2 Service Factors Influencing Spatial Diversity of Household Participation in Poverty Reduction Programmes

The test of Service factors in Table 23 shows three variables (access to food, access to water and access to health services) to be statistically significant at $p < 0.05$ with positive coefficients. Test of access to food shows positive coefficient and $t = 3.200$. This suggests that households with access to food are likely to participate more in poverty reduction programmes as they appeared to have low pressure on food demand thus devoted their time and finance resources on TASAF programme activities.

On the other hand access to water service have shown positive coefficient and $t = 4.16$. This implies that access to water increases household's participation in poverty reduction programmes. Increased access to water services reduces time and finance spent by on water, thus allowing them to commit such resources in poverty reduction programmes.

The coefficient for access to health service is statistically significant at $t = 11.37$. This implies that household with access to health services are likely to participate more in poverty reduction programmes. This implies that Rungwe District which has high access to health services is able to achieve higher household's participation in poverty reduction programmes. This is due to the fact that health services enables household member to

remain active and physically capable to participate in project activities. This fact is also supported by Eman (2003) who reported contribution of health services on community participation in Palestine.

4.5.4.3 Physical Factors in Influencing Spatial Diversity of Household Participation in Poverty Reduction Programmes.

The results in Table 23 also show positive coefficient of three physical factors namely: land resource, vegetation and distance. The coefficient of land resource showed positive coefficient at $t=3.39$. This implies that households from districts with adequate amount of arable land were able to participate in TASAF programmes than those with relatively low amount or not owning land at all. This is due to the fact that most income generating activities in rural areas and TASAF in particular are based on the use of land. Therefore land remained as an important factor in influencing household's participation in poverty reduction programmes.

Vegetation showed positive coefficient and at $t= 6.52$. This implies that Vegetation is the one of physical factors influencing spatial diversity of households' participation in development programme. Vegetation was conceived to be one of the spatial factors influencing diversity of household participation since it determines availability of pasture for some of livestock. Most of surveyed projects were livestock based, thus for the household to decide to participate or not participate was determined by availability of pasture which is the vegetation factor.

Distance to the project area has shown negative coefficient at $t=-2.56$. This result imply that distance has inverse influence on households' participation in poverty reduction programmes. Since Rungwe District observed with shorter distance to the project area,

then, it is obvious that its participation level will be higher as compared to the other districts. The more distant the households' location the less the participation will be. More distance to the project areas increases travelling cost and may reduce access to information from the participating households. These results support findings by Koopman, J. (2001) who argue that distance to project area affects negatively, community participation in development activities.

Table 23: Linear regression analysis of factors influencing households' participation diversity

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
				Beta		
1	(Constant)	.523	.119		4.407	.000***
	Education	.120	.050	.092	2.416	.016**
	Income	.399	.029	.523	13.656	.000***
	Household size	.130	.040	.124	3.250	.056*
2	(Constant)	-1.730	.260		-6.666	.000***
	Education	.074	.042	.057	1.772	.077
	Income	.249	.027	.326	9.341	.000***
	Household size	.081	.034	.077	2.407	.056*
	Access to food	.185	.058	.104	3.200	.001***
	Access to water	.052	.012	.133	4.165	.000***
	Access to health	.780	.069	.428	11.378	.000***
	Access to Primary Education	.089	.047	.068	1.904	.057*
3	(Constant)	-2.091	.278		-7.536	.000***
	Education	.089	.039	.068	2.263	.024**
	Income	.216	.026	.283	8.445	.000***
	Household size	.078	.032	.075	2.462	.054**
	Access to food	.170	.055	.095	3.115	.002**
	Access to water	.044	.012	.113	3.740	.000***
	Access to health	.490	.088	.269	5.560	.000***
	Access to Primary Education	.071	.044	.054	1.608	.108
	Agglomeration	.026	.029	.027	.895	.371
	Land resource	.133	.039	.110	3.394	.001***
	Climate	-.016	.046	-.010	-.339	.735
	Vegetation	.184	.028	.212	6.523	.000***
	Distance	-.142	.055	.112	-2.564	.011**

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.6 Influence of Spatial Diversity of Household Participation in Poverty Reduction

This part provides analysis of Objective Four. The Objective Four intended to assess the influence of spatial diversity of household participation in poverty reduction. The analysis of this objective was guided by the third null hypothesis which assumed that, spatial diversity of households' participation has no influence on poverty reduction. The study laid out a simple framework to discuss the influence of participation on poverty reduction. The study confined its analysis of poverty reduction by taking only one variable of poverty reduction, ie. income poverty. The study based on income since income poverty reduction was the target of all surveyed projects in the study area. The analysis of poverty reduction was made into two levels. The first level analyzed the change in poverty between participating households and non participating households. This part involved linear regression model to see how different levels of participation influence income poverty reduction.

4.6.1 Influence of Participation on Poverty Reduction among Participating and non Participating Households

This part intended to assess how process of income poverty reduction differs between participating and non participating households. Thus, a linear regression was used to identify the influence of participation on poverty reduction. Results in Table 24 show that, households' participation in poverty reduction programmes have positively influence income poverty reduction at $t= 2.218$, as $p<0.05$. This means districts with high households' participation in poverty reduction programmes were able to reduce the income poverty from of participating households. Therefore, these results lead to the rejection of the null hypothesis that, spatial diversity of household participation has no influence in poverty reduction. These results imply that, household who participate in

poverty reduction programmes earn higher level of income as compared to those who do not participate.

Table 24: Linear Regression Analysis of the Influence of Participation on Income Poverty Reduction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.906	.019		48.762	.000
	Part01	.030	.013	.101	2.218	.027

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.6.2 Influence of Participation on Poverty Reduction among Participating Households

Again linear regression model explored the influence of different levels of households' participation on income poverty reduction. The idea was to verify if income poverty will reduce as a result of increased household participation in poverty reduction programmes. Results in Table 25 show a positive coefficient of participation. This means that increases in participation has significant influence on income poverty reduction $t=2.567$. The implication of these findings is that income of households' participating in poverty reduction programmes increases as long as they engage more in poverty reduction programmes activities. This means the more they participated in poverty reduction programmes, the more they will widen their chances of increasing income, hence reduce their income poverty. This is due to the fact that households' participation in poverty reduction programmes increases their chance to tap resources provided by projects. This findings are compatible with situation in the TASAF programme, where by people who participate more are able to receive enough number of oxen and dairy's goats and hence convert them into cash after selling. Thus, the implication of these results are that poverty

reduction programmes must ensure that income generation remains one of the important aspect to be addressed by poverty reduction programmes. These results are consistent with study by Tran *et al.* (2012) who reported that people who participated more in income generating project were able to raise their income than those who participated less.

Table 25: Linear regression of influence of households' participation on poverty reduction among participating respondents

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	2.104	.061		34.743	.000
Participation levels	.062	.024	.117	2.567	.011

Note: * significant at $p < 0.1$, ** significant at $p < 0.05$ and *** significant at $p < 0.001$

4.7 The link Between Theory and the Study Findings

The findings of this study have a high link with the theory of communicative action. The study was guided by the Communicative Action Theory of Harbemas (1999). The theory assumes that households' participation in poverty reduction programmes is influenced by a number of pulling factors i.e. income, education, infrastructures, age, marital, sex , etc (see section 2.2.7). Also the theory assumes that spatial units i.e. villages and/or districts have variations in terms of socio-economic, service and spatial factors, and more importantly, these factors are responsible in influencing the households' participation in poverty reduction programmes.

Based on the above findings of this study were able to answer the above theoretical manifestations. Firstly, the study analyzed the level of households' participation in poverty reduction programmes at both district and village level. The results proved that

districts differ significantly while villages do not. Secondly, the study was able to identify factors which vary across districts. The results showed that socio-economic, education, income, and household size vary significantly across districts. It also showed that service factors such as: access to education, access to water, access to health service and access to food have significant variation across districts. Physical factors ie. agglomeration cost advantage, land resource, vegetation, climate and distance to the project area are noted to vary significantly. The study considered theoretical assumption on whether household's participation is influenced by socio-economic, service and physical factors? The study has proved that, socio-economic factors i.e income and education, Service factors ie. access to food, access to water, access to health services and physical factors i.e land resource, vegetation and distance to project area have a significant influence on households' participation in poverty reduction programmes. Lastly, the study was able to prove the theoretical assumption that whether household participation in poverty reduction programmes reduces income poverty. The study findings show that households' participation in poverty reduction programmes has a significant influence on income poverty reduction.

4.8 Contribution of the Study

The findings of this study contribute both theoretically and empirically. Theoretically, they contribute to the present body of literature on spatial diversity of households' participation in poverty reduction programmes. The present status of spatial diversity of households' participation in poverty reduction programmes, and more importantly, the modalities of household's participation in development programs, has been exposed through this research. It also affirms the rationale of households' participation in reducing poverty.

On the other hand, this study identified socio-economic, Service and spatial factors which vary across districts. The importance of this information is that the Government of Tanzania and other development stakeholders will be able to address spatial variations in terms of observed socio-economic, Service and spatial factors.

In addition to the above mentioned, this study has identified socio-economic, service and physical factors which influence spatial diversity of household's participation in poverty reduction programmes. This information will help policy and programme designing especially when households' participation is implicated in development and poverty reduction programmes.

The study has also exposed the link between households' participation in poverty reduction programmes. This information is very essential as it provide the evident of importance of participatory approaches in addressing poverty. It indicates the useful path to be used by policy makers and practitioners in addressing income poverty among poor households.

4.9 The Summary of Chapter

This Chapter dealt with analysis, results and discussion of the study findings. The analysis of data was guided by a research question and several hypotheses. In order to answer research question and test such hypotheses descriptive and inferential statistical methods were applied, respectively. The part of descriptive included: frequencies and percentages. The inferential statistical methods included ANOVA, Post Hoc, and Linear Regression. Also Freidman Test and Cronobach Alpha were used to test validity and reliability of scales used in this study respectively.

Generally, the study findings were able to provide evidence of Objective One that districts have diversity in terms of level of households' participation in poverty reduction programmes. The variation was not significant at the village level. The analysis of Objective Two proved that socio-economic factors namely; income, education, household size have variations across districts. Service factors such as access to food, access to water, access to health services and access to education have noted to vary significant across districts. Physical factors such as agglomeration cost advantage, land resource, vegetation, climate, distance to project area have showed significant variation. The results from Objective Three were able to identify factors which influence spatial diversity of household's participation in poverty reduction programmes. Socio-economic factors such as income and education were found to be significant in influencing households' participation in development programme. Service factors Access to food, access to water, and access to health services were found to have significant influence on household's participation in development programme. Physical factors such as land resource, vegetation and distance to project area were found to have significant influence on household's participation in development programme. The analysis of Objective Four was able to prove that households' participation in poverty reduction programmes has significant influence on poverty reduction. The subsequent sections present conclusions and recommendations emerging from the major findings of the study.

CHAPTER FIVE

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This Chapter has discussed and concludes the findings of this research study. These discussions helped provide conclusion so that to answer research question of Objective 1 and hypotheses of objectives 2, 3 and 4. Prior to analysis of objectives 1, 2, 3 and 4, the study analyzed socio-economic characteristics of respondents. Generally, all the three districts showed differences in terms of education, income gender, age, household size, occupation and location of households.

5.1.1 Levels of Spatial Diversity on Households' Participation in Poverty Reduction Programmes

Objective One assessed levels of spatial diversity on households' participation in poverty reduction programmes. Based on results from box plot (Figure 5) two conclusions can be made.

- (i) Households from Rungwe District participate more in poverty reduction programmes followed by those from Mvomero District. Households from Bahi District recorded low level of participation in development programme. The level of households' participation in poverty reduction programmes has implications in success of poverty reduction programmes. Therefore, it is obvious that Rungwe District realizes significant changes in terms of income poverty reduction, followed by Mvomero District. Bahi District is the least as households' participation in poverty reduction programmes is also low in Bahi District.

- (ii) Households' participation levels in poverty reduction programmes were measured in terms of cash, material and labour contribution to the projects. These forms of participation were noted to be useful. However, more modalities need to be adopted so as to ensure that vulnerable households which cannot afford to contribute cash, material or labour participate in poverty reduction programmes. In this case, it is pointed out that, poverty reduction programmes need to adopt different modalities of participation so as to expand the scope of households' participation in poverty reduction programmes.

5.1.2 Variation in Spatial Diversity of Household Participation in Poverty Reduction Programmes in the Study Area.

The analysis under objective two wanted to prove if there is districts' variation households' participation in poverty reduction programmes.

- (i) Based on ANOVA results it can be concluded that there is significant difference among the three districts. Therefore, it is concluded that there is a proof that households' participation in poverty reduction programmes vary from one district to another.
- (ii) Post Hoc test was used to determine which among the three districts has meaningful differences. The study observed that all the three districts (Bahi, Mvomero and Rungwe) have significant variation in terms of socio-economic, services and physical factors.

5.2.3 Factors Influencing Spatial Diversity on Households' Participation in Poverty Reduction Programmes

The analysis of Objective Three intended to identify socio-economic, service and physical factors which influence households' participation in poverty reduction programmes. Before the test of such factors, the study analyzed variations of such factors across districts. Based from results of ANOVA, Post Hoc and Linear Regression Model the following conclusion can be made.

- (i) Results of ANOVA test have confirmed that socio-economic factors such as: education, income and household size vary significantly across districts.. On the other hand material services such as access to: food, water, health service and primary education have shown significant variations across districts. The analysis of spatial factors has shown that, agglomeration cost advantage, land resource, vegetation, climate and distance to the project area vary significantly across the districts. Therefore it is concluded that poverty reduction programmes must ensure that are significantly adhered in formulation of such programmes
- (ii) Post Hoc test on socio-economic factors have proved that, Rungwe and Bahi districts differ significantly in terms of socio-economic factors such as income, education and household size. Mvomero and Bahi just differ in terms of income. On the other hand Rungwe and Mvomero district differ significantly in terms of income. This analysis concludes the fact that these districts need to adopt different strategies when addressing some socio-economic issues which differ and adopt similar strategies in areas which do not differ.

- (iii) Post Hoc test on service factors has confirmed that, Rungwe and Bahi districts differ significantly in terms of material service such as access to food, access to water, access to health services. Mvomero and Bahi Districts do not differ in any of Service factors. On the other hand Rungwe and Mvomero district differ significantly in terms of access to water and access to primary education. Again this analysis concludes the fact that districts need to adopt different strategies when addressing some of Services issues when they found differences and adopt similar strategies in areas where there are no variations of material services factors.
- (iv) Post hoc test on spatial factors shows that all the three districts have significant variations in terms of: agglomeration cost advantages, vegetation, climate and distance. The analysis of access to land resource showed significantly variation between Rungwe and Bahi Districts. There was also significant different between Rungwe and Mvomero districts. There was no significant difference on land resource when Bahi and Mvomero district were compared. Again this analysis concludes the fact that districts need to adopt different strategies when addressing some of physical factors except land resource which was noted to be similar between Bahi and Mvomero Districts.
- (v) The results from sequential linear regression in Table 23 have confirmed that socio-economic factors namely: income and education have significant influence on households' participation in poverty reduction programmes. Therefore it is logical to make conclusion that, individuals with large income and higher education take better chance of participating in the poverty reduction programmes than income-poor and uneducated households.

- (vi) The results from sequential linear regression in Table 23 also revealed that service factors such as; access to food, access to water and access to health services are important in promoting households' participation in poverty reduction programmes.
- (vii) On the other hand, the same Table 23 shows physical factors which influence households' participation in poverty reduction programmes. These are; access to land resources, vegetation and distance to the project area.

5.1.4 Influence of spatial diversity of household participation on poverty reduction.

This objective anticipated to measure the influence of spatial diversity of household participation on poverty reduction. The analysis was done to compare income for non-participating respondents against participating respondents. The second part of this analysis was to see if income increases parallel with increase in participation levels. Linear regression was adopted in both scenarios. Based on the results of linear regression model the following conclusions are made.

- (i) Household' participation in poverty reduction programmes have influence income poverty reduction. The income of participating households was noted to increase significantly when compared to non-participating households.
- (ii) The more one participates in poverty reduction programmes automatically increases chances of reducing income poverty. This was witnessed in the results in Table 25 which shows increasing income as a result of increased participation.

5.3 Recommendations

In view of the major findings of the study and the above conclusions, the following recommendations for policy and actions can be made to reduce spatial diversity of household participation in poverty reduction programmes.

i) Participatory System

This research study found that the present system which uses cash, material and labour contribution to guide households' participation in poverty reduction programmes, is not desirably working for ensuring poverty reduction in Tanzania. This system can only be used for households with capacity to contribute, not for poor and vulnerable households. In fact, this system created spatial diversity in both participation and poverty status. In the case of Bahi District where majority of households are poor, this system is insufficiently functioning. It is therefore recommended that poverty reduction programmes must use a system which is spatially friendly. This implies that systems must be able to recognize spatial differences before setting up poverty reduction programmes.

ii) Integrated Participatory Strategies

Based on the findings of the study, it is recommended that an integrated approach should be used to motivate household's participation in poverty reduction programmes. Participation was noted to vary by districts due to number of socio-economic, Service and spatial factors. In this case poverty reduction programmes need to adopt an integrated set of participatory strategies in all stages of project cycle. This should be backed with detailed analysis of case study differences in terms of socio-economic, Service and spatial factors. Ideally, area differentials must be incorporated in the design of strategies for motivating household participation in poverty reduction programmes.

iii) Addressing Spatial differences on Socio-economic Factors

Since study findings have shown that income and education influence households' participation in poverty reduction programmes, there is a need to ensure education and income generating policies and programmes reflect this demand. Poverty reduction programmes must make sure that districts which have low education levels low per capita receive special interventions in terms of income and education.

vi) Addressing Spatial Differences on Service Factors

Study findings have shown that access to; food, water and health services influence households' participation in poverty reduction programmes. This fact needs to be supported by policy interventions aimed at ensuring that poverty reduction programmes incorporate food, water and health components so that to attract households who failed to participate due to food, water and health constraints.

v) Addressing Spatial Differences on Physical Factors

Physical factors namely: land resource, vegetation and distance to the project area influence households' participation in poverty reduction programmes. Therefore, the policy issues here are to ensure that these factors are incorporated in poverty reduction programmes which address poverty. Poverty reduction programmes must be able to observe districts differences in terms of spatial factors and use such difference in framing out intervention plans.

vi) Promoting Households' Participation to Intervene Poverty

Based on the results, it is very clear that households' participation in poverty reduction programmes have positive influence on income poverty reduction. The disappointing fact is that, there are some poor households which do not participate in poverty reduction

programmes due to low education or other socio-economic, material service and spatial factors. Therefore, it is recommended here that poverty reduction programmes taking part at the local level must ensure that, education campaigns are well intensified so as to promote high involvement of uneducated and poor household members.

(vii) Recommendations for Further Researches

This study opens up for further research opportunity. Firstly, the recommended system of effective household's participation in poverty reduction programmes could be tested in the field. If poverty reduction programmes like TASAF could not change their present system of households' participation, they will still experience spatial diversity in terms of households' participation in poverty reduction programmes.

Secondly, further research could be conducted to explore influence of cultural factors that influence households' participation in poverty reduction programmes. This area was beyond the scope of this study. It is therefore important to see if there are critical cultural factors which affect the trend of household participation in poverty reduction programmes.

Thirdly, further research could be conducted to assess the influence of household's participation in non-income poverty reduction. This area was beyond of this study since all sampled projects were based on income generating projects as no any income project was found from the selected villages.

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APPENDICES

Appendix 1: Questionnaire to Head of Household

I. Questionnaire on Spatial Diversity of Household Participation in Poverty Reduction Programmes

Questionnaire Number.....

A: General Identification Variables

1. District:	
2. Division	
3. Ward	
4. Village:	
5. Sub-village	
6. Interviewee No:	
7. Name of interviewer	
8. Timing	Date..... Start time..... End time

B: General Household Information

9. Name of the head of household	
10. Gender of the head of household	1. Male <input type="checkbox"/> 2. Female <input type="checkbox"/>
11. Person responding to the interview	1. Head of HH <input type="checkbox"/> 2. Spouse <input type="checkbox"/> 3. Children <input type="checkbox"/> 4. Other specify <input type="checkbox"/>
12. Education level	1. Non formal <input type="checkbox"/> 2. Primary <input type="checkbox"/> 3. Secondary <input type="checkbox"/> 4. Tertiary <input type="checkbox"/>
13. Marital Status	1. Married <input type="checkbox"/> 2. Widow <input type="checkbox"/> 3. Divorced <input type="checkbox"/> 4. Never Married <input type="checkbox"/>
14. Number of members of the household	Adults: Children: Total.....
15. Ethnic Group of Household	Specify.....
16. Religion of the Household	1. Christian <input type="checkbox"/> 2. Muslim <input type="checkbox"/> 3. Traditionalist <input type="checkbox"/> 4. Other (Specify).....
17. Occupation of Head of HH	1. Housework <input type="checkbox"/> 2. <input type="checkbox"/> Farming (Livestock/Fishing) <input type="checkbox"/> 3. Small Business <input type="checkbox"/> 4. Day Labour <input type="checkbox"/> 5. Salaried Worker <input type="checkbox"/> 6. Medium Entrepreneur <input type="checkbox"/> 7. Large Business <input type="checkbox"/> 8. Other (Specify).....
18. Occupation of the Spouse	1. Housework <input type="checkbox"/> 2. <input type="checkbox"/> Farming <input type="checkbox"/> 3. Small Business <input type="checkbox"/> 4. Day Labour <input type="checkbox"/> 5. Salaried Worker <input type="checkbox"/> 6. Medium Entrepreneur <input type="checkbox"/> 7. Large Business <input type="checkbox"/> 8. Other (Specify).....
19. Location of Household	1. Urban <input type="checkbox"/> 2. Rural- center <input type="checkbox"/> 3. Rural-Main Road <input type="checkbox"/> 4. Marginalized Rural <input type="checkbox"/>
20. Distance from the Project Point	1. Less than ½ km <input type="checkbox"/> 2. Less than 1 km <input type="checkbox"/> 3. Less than 5km <input type="checkbox"/> 4. More than 5 km <input type="checkbox"/>

C. Spatial diversity of Household participation levels in Poverty Reduction Programmes

<p>21. Are you participating in any of TASAF project?</p> <p>21. If you participate specify type of project(s) you engaged</p> <p>22. When did you started to participate in TASAF project?</p> <p>23. Describe your role/position in the Project?</p> <p>24. How do you rank your level of participation in terms of Income, Time and Materials?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>1..... 2..... 3.....</p> <p>1. Leader <input type="checkbox"/> 2. Beneficiary and Implementation <input type="checkbox"/> 3. Beneficiary Only <input type="checkbox"/></p> <p>1. Full Participation <input type="checkbox"/> 2. Rarely Participation <input type="checkbox"/> 3. Very Low Participation <input type="checkbox"/></p>
<p>23. How many hours do you spend in project activities in a month/year</p>	
<p>24. How much money do you contribute to the project in a month/year</p>	
<p>25. What is a value of materials you have contributed to the project in month/year</p>	
<p>26. Describe type of material contributed and their values</p>	
<p>27. Does participation level differs among Households?</p> <p>28. If Yes. Specify how?</p> <p>29. Does participation differs among villages</p> <p>30. If Yes. Specify how?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>.....</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>.....</p>

D: Perceptions and Attitudes of Household level participation in Poverty Reduction Programmes

How did hear about the TASAF project?

Source/Media	Response	Is it useful	How frequent are you accessing it?
Training	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Extension agent	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Radio	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Magazines	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Posters	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Booklets	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Leaflets	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Farmers groups	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Village meeting	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Exchange visits	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Field days	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>
Nyinginezo	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Not available <input type="checkbox"/> Less frequent <input type="checkbox"/> Very Frequently <input type="checkbox"/>

31. How do you perceive Household Participation in Poverty Reduction Programmes.....

Items for Perception	1= No, 2=Yes
1. Do you know TASAF project	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. Do you know that TASAF project needs you to participate?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3. Does TASAF project needs you to contribute money?	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/>
4. Does project needs you to spent time in performing project activities	<input type="checkbox"/> No <input type="checkbox"/>
5. Does TASAF project needs you to contribute materials?	Yes <input type="checkbox"/> No <input type="checkbox"/>
6. Do you know reasons for having TASAF project at your village?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If Yes. Mention Reasons.....	
.....	
.....	
.....	
7. Does your participation in project important?	Yes <input type="checkbox"/> No <input type="checkbox"/>
8. Have you ever seen participatory project before TASAF?	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/>
9. Have ever seen any District-TASAF official at your village	<input type="checkbox"/> No <input type="checkbox"/>
10. Have ever participated in initiation of TASAF projects?	Yes <input type="checkbox"/> No <input type="checkbox"/>
11. Have ever participated in setting budget of TASAF projects?	Yes <input type="checkbox"/> No <input type="checkbox"/>
12. Have you participated in monitoring and evaluating TASAF projects?	Yes <input type="checkbox"/> No <input type="checkbox"/>
13. Do you think participation would benefits you?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If Yes: Mentions benefits: 1=Income. 2= Food, 3= Wealth.....	

32. What is your attitudes towards Household Participation in Poverty Reduction Programmes.....

Items for Attitudes	1= No, 2=Yes
1. Do you feel good on the presence of TASAF project at your village	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. Do you feel good in participating in TASAF project?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3. How do you feel to contribute cash in projects?	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/>
4. How do you feel to spent time on project activities?	<input type="checkbox"/> No <input type="checkbox"/>
5. How do you feel to contribute material?	Yes <input type="checkbox"/> No <input type="checkbox"/>
6. Does TASAF project meet your expectations?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If Yes/ No. Mention How.....	
.....	
.....	
7. Do you feel any value for participating in project?	
8. Does TASAF project works better than other project?	
9. Does District-TASAF official works better than other Government Staff?	Yes <input type="checkbox"/> No <input type="checkbox"/>
10. Does selected project relevant to your life?	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/>
11. Does the budget of TASAF projects meet you demands?	<input type="checkbox"/> No <input type="checkbox"/>
12. Does TASAF monitoring and evaluating system impress you?	
13. Does participation real benefits you than not participating?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If Yes: Mentions benefits: 1=Income. 2= Food, 3= Wealth.....	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/>

E. Factors influencing household level participation in poverty reduction programmes

E1: Teleological Factors: Employment, Income and Distance:

E.1.1 Employment

33. Does the Project created employment among participating households

Type of Job	Number of Working Days per Month	Number of Activities Assigned	Amount of Wage	Total Cash
1. Project Leader				
2. Manager				
3. Supervisor				
4. Animator/ Focal Person				
5. Consultant				
6. Contractor				
7. Technician				
8. Permanent Worker				
9. Part time Labour				
10. Other Specify.....				

E.1.2 Income: (Apart from that earned from being employment in the Project)

34. Give production costs, average production, selling price and income for production of products supported by the project?

Type of Product	Production Cost	Project Contribution	Quantity Products	Quality of Products	Selling Price	Total Cash

E.1.3 Distance:

35. Does Project reduced traveling distance to services point?

Type of Project Services	Previous Distance	Current Distance	Reduced Traveling Time	Saved Costs of Traveling

E 2: Normatively Factors: Values, norms or behaviour of the community

36. Does project affects your values, norms of common behavior? 1=Yes , 2=No

37. If Yes. Mention where exactly your values, norms and behaviour have been disturbed?

Area/Stage	Norm/ Value of Behaviour disturbed	Person /Staff Involved	Reasons for Disturbance	Level of Disturbance		
				High	Moderate	Low
1. Project Initiation Methods						
2. Type of Project						
3. Project Management						
4. Participation Modality						
5. Cost Sharing						
7. Meeting day and Time						
8. Gender Concerns						
9. Religion						
10. Adulthood						
11. Status Quo						

E3: Dramaturgical Factors: Elders, Religious Leaders, Traditional Healers and Elites

38. Do you think recognition of elders, religious leaders, traditionalist/healers and elites in project is important? 2=Yes , 1=No

39. Do you think the project has adequately involved elders, religious leaders, traditional healers and elites? 2=Yes , 1=No

40. If Yes. Mention level of involvement of elders, religious leaders, traditional healers and elites in the project?

40.1 Elders

Stages/ Level	1=Low Involved	2= Rarely Involved	3= Medium	4= Highly Involved
1. Project Initiation				
2. Project Planning				
3. Budgeting				
4. Implementation				
5. Advisory				
6. Monitoring and Evaluation				

40.2 Religious Leaders

Stages/ Level	1=Low Involved	2= Rarely Involved	3= Medium	4= Highly Involved
1. Project Initiation				
2. Project Planning				
3. Budgeting				
4. Implementation				
5. Advisory				
6. Monitoring and Evaluation				

40.3 Traditional Healers

Stages/ Level	1=Low Involved	2= Rarely Involved	3= Medium	4= Highly Involved
1. Project Initiation				
2. Project Planning				
3. Budgeting				
4. Implementation				
5. Advisory				
6. Monitoring and Evaluation				

40.4 Elites

Stages/ Level	1=Low Involved	2= Rarely Involved	3= Medium	4= Highly Involved
3. Project Initiation				
4. Project Planning				
3. Budgeting				
4. Implementation				
4. Advisory				
6. Monitoring and Evaluation				

E.4 Communicative Factors: Education and Skills between Project Staff and Beneficiaries

41. Does the project offers mutual understanding among stakeholders? 2=Yes , 1=No

42. What mechanisms were applied to promote mutual understanding between project staff and beneficiaries?

Mechanism	2=Yes	1=No	Number/ Frequency per Annum
Meetings			
Campaigns			
Trainings			
Study Tour			
Delegation of Authority/Activities			

F.2 Food Security

How many farm plots do you have?

Plot No.	1	2	3	4
Location	Upstream <input type="checkbox"/> Middle <input type="checkbox"/> Downstream <input type="checkbox"/>			
How was it acquired	Inherited <input type="checkbox"/> Bought <input type="checkbox"/> Rented/borrowed <input type="checkbox"/>			
If rented or borrowed from who?	Father <input type="checkbox"/> Spouse <input type="checkbox"/> Neighbour <input type="checkbox"/> Village govt <input type="checkbox"/>	Father <input type="checkbox"/> Spouse <input type="checkbox"/> Neighbour <input type="checkbox"/> Village govt <input type="checkbox"/>	Father <input type="checkbox"/> Spouse <input type="checkbox"/> Neighbour <input type="checkbox"/> Village govt <input type="checkbox"/>	Father <input type="checkbox"/> Spouse <input type="checkbox"/> Neighbour <input type="checkbox"/> Village govt <input type="checkbox"/>
Est Acreage for each plot				
Under the Project?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Acreage under the Project?				
Does the Project provided inputs of food production?			Yes <input type="checkbox"/> No <input type="checkbox"/>	
If yes. Mention inputs provided by the project?				
Types of inputs			Units per Annum	

How does project improved your farming practice?

In-situ system	Yes <input type="checkbox"/> No <input type="checkbox"/>
Deep tillage	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ridging, contouring and terracing	Yes <input type="checkbox"/> No <input type="checkbox"/>
Sunken seed bed (maboda)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Pit holes	Yes <input type="checkbox"/> No <input type="checkbox"/>
Micro RWH systems	
Roof top RWH without storage tanks	Yes <input type="checkbox"/> No <input type="checkbox"/>

What was your food production capacity before joining the project?

Type of Food	Quantity Per Annum	Price Per Unit	Amount
--------------	--------------------	----------------	--------

What is your food production capacity after joining the project?

Type of Food	Quantity Per Annum	Price Per Unit	Amount
Is food produced in your farm enough for household consumption last year?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
If not, how did you make up the shortfall?		Bought with other income <input type="checkbox"/> Borrowed <input type="checkbox"/> Food aid <input type="checkbox"/> Sold assets to buy <input type="checkbox"/> Didn't <input type="checkbox"/>	

1. F.3 Wealth Assets

Livestock ownership

Types	
Cattle	Less than 10 <input type="checkbox"/> 10 to 20 <input type="checkbox"/> More than 20 <input type="checkbox"/> None <input type="checkbox"/>
Goats	Yes <input type="checkbox"/> No <input type="checkbox"/>
Sheep	Yes <input type="checkbox"/> No <input type="checkbox"/>
Chicken	Yes <input type="checkbox"/> No <input type="checkbox"/>
Donkeys	Yes <input type="checkbox"/> No <input type="checkbox"/>

House

Types	Response
Brick made	Yes <input type="checkbox"/> No <input type="checkbox"/>
Soil made with Iron Sheet	Yes <input type="checkbox"/> No <input type="checkbox"/>
Soil made without Iron Sheet	Yes <input type="checkbox"/> No <input type="checkbox"/>

Transport Facilities

Types	Units
Car	Yes <input type="checkbox"/> No <input type="checkbox"/>
Motorcycle	Yes <input type="checkbox"/> No <input type="checkbox"/>
Bicycles	Yes <input type="checkbox"/> No <input type="checkbox"/>
Cart	Yes <input type="checkbox"/> No <input type="checkbox"/>

Farming Equipments:

Plough/ridger	Yes <input type="checkbox"/> No <input type="checkbox"/>	Radio	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ox-cart	Yes <input type="checkbox"/> No <input type="checkbox"/>	Bicycle	Yes <input type="checkbox"/> No <input type="checkbox"/>
Water storage facility	Yes <input type="checkbox"/> No <input type="checkbox"/>	House roofed with corrugated iron sheets	Yes <input type="checkbox"/> No <input type="checkbox"/>
Bed	Yes <input type="checkbox"/> No <input type="checkbox"/>	Mattress	Yes <input type="checkbox"/> No <input type="checkbox"/>

Appendix 2: Interviews Guide for Heads of Departments and Sections

Extension staff in the villages will be interviewed individually using a semi-structured questionnaire provided in the debriefing document. The following questions will be asked:

- i. Have you ever involved in any of TASAF project? When? Where? Who organized? How many times?
- ii. If yes, which of TASAF projects you were involved?
- iii. Was there any support provided by TASAF enable you communicate to assist local people/farmers?
If yes, what kind of support was provided? (to be coded later)
If not, what could be the reason?
- iv. How does TASAF fit in your everyday extension work?
- v. Are TASAF officials coming to you to seek for assistance/information?

Yes No
If yes, how do you assist them? If no, why do you think they are not coming to seek for information?
- vi. How do rate people participation in TASAF projects?
- vii. What approach would you prefer most in TASAF should use to involve people?
- viii. What practical constraints do you think TASAF are facing in involving people?
- ix. How do you rate TASAF performance in relation to, income, food security and wealth creation?
- x. What would you suggest to improve future operations of TASAF in?
- xi. What do they think are the most important factors that influence people to participate in TASAF projects?
- xii. What are the benefits/shortcomings that farmers get by adopting TASAF interventions?

Appendix 3: Questionnaire for District, Ward and Village Officials

General Identification Variable:

1. District:
2. Division
3. Ward
4. Village:
5. Sub-village
6. Interviewee No:
7. Name of interviewer
8. Timing Date..... Start time..... End time

B: Personal Information

9. Name of the Officer
10. Gender of the Officer 1. Male 2. Female
12. Education level 1. Non formal 2. Primary 3. Secondary 4. Tertiary 5. University
13. Position

14. What is your understanding about TASAF?
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.....
.....

16. What implies by Household participation in TASAF Project?
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17. Does Hh participation in TASAF projects useful?

18. How do you involve people in Projects?
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19. How do you measure Hh participation?
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.....

20. How do people understand TASAF participation concept/model?
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21. How do you rate people's attitudes by participating in TASAF projects?
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22. What are factors influencing people participation?
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23. What are challenges of participation?

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24. Does TASAF projects bring impact on Hh income? If Yes. Mention how and at what extent

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