

**‘Voluntary’ resettlement for improved livelihoods? Examining food
security, nutrition, and informed consent amongst land reform
participants in southern Malawi**

by

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ABSTRACT

Land scarcity and food insecurity are critical concerns for billions of individuals worldwide; voluntary resettlement, as a type of land reform, offers governments and aid agencies a controversial approach to address these concerns. This thesis examines the case of a US\$38-million World Bank-funded voluntary resettlement scheme in southern Malawi known as the Community Based Rural Land Development Project, through which 15,000 low-income farming households moved internally from densely populated areas to underutilized plantations between 2004 and 2011. The project and its explicit goals (to increase participant income and agricultural productivity) have been the subject of several studies, but the wider range of indirect outcomes and possible unintended consequences are lesser known, which this thesis works to address. The first analytic chapter assesses the extent to which the project was ‘voluntary’, and considers the real versus perceived land tenure claims established by the programme. To enhance understanding this analysis, this chapter also considers factors influencing household participation and withdrawal in the resettlement. Quantitative and qualitative analysis of surveys (N=203), focus group discussions (N=5) and interviews (N=20) suggest that participants did not have a clear understanding of the project conditions, and that they perceived their new ownership rights to be more secure and individual than they were by law. Additionally, attrition rates were analyzed: despite numerous influences factoring into participant decisions to withdraw and return ‘home’, availability of land in the district of origin and access to infrastructure in the district of resettlement played significant roles. The second analytic chapter assesses the effectiveness of voluntary resettlement in improving food security, including its effects on dietary diversity. Regressions and statistical analyses of Dietary Diversity Scores indicate that participants had statistically significant lower levels of food security and dietary diversity than former and non-beneficiaries, possibly due to a lack of infrastructure and access to markets. These findings highlight the importance of participatory holistic planning for voluntary resettlement, particularly to ensure participant understanding of future living conditions, and ultimately challenge the utility of voluntary resettlement as a policy tool to improve the well-being of subsistence farmers.

PREFACE

I identified the initial concept, however the research design was based on collaborations between myself, Dr. Zerriffi and Dr. Le Billon. I conducted the research, analysis and wrote the manuscript, with on-going feedback from my supervisors, Hisham Zerriffi and Philippe Le Billon. For the purposes of this manuscript, I am the sole author of all of the chapters. Versions of Chapters 2 and 3 will be submitted for publication following thesis submission.

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TABLE OF CONTENTS

ABSTRACT	ii
PREFACE	iii
TABLE OF CONTENTS	iv
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
LIST OF ABBREVIATIONS	viii
GLOSSARY	ix
ACKNOWLEDGEMENTS	xi
1. INTRODUCTION	1
1.1 Overview	1
1.2 Research Objectives	3
1.3 The Malawian Context	3
1.4 Case Study: The Community-Based Rural Land Development Project	5
1.5 Methodology	8
1.6 Thesis Focus and Contents	11
2. Moving Home: Factors Influencing Household Participation in and Withdrawal from Voluntary Resettlement in Malawi.....	13
2.1 Introduction	13
2.2 Literature Review	15
2.2.1 Livelihoods in Land Reform.....	15
2.2.2 Overview of Land Reform	17
2.2.3 Volunteering to Resettle	19
2.2.4 The Role of Land Ownership in Voluntary Resettlement	21
2.3 Land in Malawi and the CBRLDP	23
2.3.1 Setting the Stage for the CBRLDP: A Brief History of Land Law in Malawi	23
2.3.2 Summaries of Relevant CBRLDP Findings	23
2.4 Data Analysis Methods	25
2.5 Analysis	26
2.5.1 Factors Influencing Individuals to Join the CBRLDP	26
2.5.2 Perceptions of Inclusion and Decision-Making in the CBRLDP: A Reflection on ‘Voluntary’ Resettlement.....	28
2.5.2.1 Perceptions of Choice in the CBLRDP	29
2.5.2.2 Disparate Expectations and Informed Consent: Beneficiary Perceptions of Site Conditions Pre and Post Resettlement	32
2.5.2.3 Informed Consent Within the CBRLDP: An Analysis of Perceived and Actual Land Ownership Rights	33
2.5.2.4 Summary.....	41
2.5.3 Factors Influencing Decisions to Leave the Resettlement Site	42
2.5.3.1 Attrition	43
2.5.3.2 Motivations to Leave.....	48
2.5.3.2.1 Summary.....	52
2.5.3.3 Externalities Driving Attrition.....	52

2.5.3.4. Summary.....	56
2.6 Conclusion.....	57
3. More Land to Farm, More Food to Eat? Nutrition and Food Security in Voluntary Resettlement Schemes	60
3.1 Introduction	60
3.2 Literature Review	61
3.2.1 The Link Between Food Security, Dietary Diversity and Malnutrition	61
3.2.2 Food Security and Dietary Diversity Within Land Reform.....	62
3.2.2 i) Food Security in Land Reform.....	62
3.2.2 ii) Dietary Diversity in Land Reform	63
3.2.2 iii) Food security within the CBRLDP	64
3.2.3 UNICEF Framework	65
3.3 Nutrition and Food Security in the Malawi Context	66
3.4 Methods.....	67
3.4.1 Survey Methods	67
3.4.2 Dietary Diversity Indicator	67
3.5 Analysis	69
3.5.1 Resettlement and Food Security	69
3.5.1 i) Training	69
3.5.1 ii) Inputs.....	70
3.5.1 iii) Soil Quality	71
3.5.1 iv) Market Access and Ability to Sell Crops	72
3.5.1 v) Consumption and HDDS as Proxies for Food Security Outcomes	76
Discussion	77
3.5.2 The Effects of Resettlement on Dietary Diversity.....	78
Discussion	88
3.6 Conclusion.....	91
4. CONCLUSION	93
4.1 Summary of Findings.....	93
4.2 Strengths and Limitations of this Study	95
4.2.1 Strengths	95
4.2.2 Limitations	96
4.3 Implications of Research	97
4.3.1 Local and Community-Driven Development Policy	97
4.3.2 General Land Reform Policy	97
4.3.3 Land Reform Policy as part of Local and Community-Driven Development.....	98
4.4 Potential for Future Research.....	98
REFERENCES	100
Appendices	112
Appendix A: UNICEF Framework	112
Appendix B: Semi-Structured Interview Guide.....	113
Appendix C: Focus Group Discussion Guide	116
Appendix D: Dietary Diversity Questionnaire	119
Appendix E: General Questionnaire	122

LIST OF TABLES

Table 1.1 - Malawi District Characteristics	7
Table 2.1 - Pre-CBRLDP Land Ownership Types	34
Table 2.2 - Ownership Types in Malawi Following the CBRLDP	35
Table 2.3 - Beneficiary Perceptions of Land Ownership Type	36
Table 2.4 - Beneficiary Responses to Perceptions of Land Ownership	39
Table 2.5 - Summary of Attrition Rate Statistics by District of Origin.....	54
Table 2.6 - Summary of Proportion of Attrition Rates by Beneficiary Movement from District to District	54
Table 2.7 - Population Density per Square Kilometer by Select Malawian Districts in 2008	55
Table 2.8 – Select Country Averages for 2008 Population Density per Square Kilometer ...	55
Table 3.1 - Beneficiary Use of and Eligibility for Fertilizer Subsidy Programmes	71
Table 3.2 - Beneficiary Perception of Market Access.....	73
Table 3.3 - Summary Statistics of Where Beneficiaries Sell the Most Crops.....	74
Table 3.4 - Summary Statistics of Why Beneficiaries Sell More Crops in Specified Locations	75
Table 3.5 - Summary Statistics for Regression Model 1 Variables.....	81
Table 3.6 - Summary Statistics for Regression Models 2 & 3 Variables	82
Table 3.7 - Model 1	85
Table 3.8 - Model 2	87
Table 3.9 - Model 3	88
Table 3.10 - Summary of Findings from 3 Regression Models	88

LIST OF FIGURES

Figure 1.1 - Map of Malawi with District Level Population Densities and Study Sites Included in the Research.....	4
Figure 1.2 - Map of Southern Malawi with Location of Sampling Sites	9
Figure 2.1 – Beneficiary Motivations to Join CBRLDP	27
Figure 2.2 – Beneficiary Motivations to Join CBRLDP by District of Origin.....	28
Figure 2.3 – Histogram of Who Decided the Location of the Resettlement Site	30
Figure 2.4 - Proportion of Reported Attrition Rates of Total Original Beneficiary Group by Median	45

LIST OF ABBREVIATIONS

CBRLDP	Community based Rural Land Development Project (Kudzigulira Malo)
FTLRP	Fast Track Land Reform Programme
FISP	Farm Input Subsidy Programme
HAZ	Height for Age Z-Score
HDDS	Household dietary diversity survey
IDDS	Independent dietary diversity survey
IFPRI	International Food Policy Research Institute
GoM	Government of Malawi
LCDD	Local and Community-Driven Development
MARDEF	Malawi Rural Development Fund
WAZ	Weight for Age Z-Score
WHZ	Weight for Height Z-Score

GLOSSARY

Undernourishment

This indicator is assessed at the population level and it expresses when there is an inadequate consumption of kilocalories to meet energy requirements (WFP, 2015; see World Food Summit, 1996).

Malnutrition

A condition that occurs when an individual does not consume sufficient nutrients to grow, sustain life, or when they are not able to process the nutrients consumed in food due to illness. It can result from either undernutrition or overnutrition, as it pertains directly to nutrients consumed and processed, rather than kilocalories consumed (see WFP, 2015).

Food security

When individuals have consistent and reliable supply of safe, adequate (in terms of amount), and nutritious food to sustain life that is both healthy but also allows them to work and engage in activities (see World Food Summit, 1996).

Anthropometric indicators

These are indicators used to identify the imbalance in nutrition in children who are suffering from malnutrition, and who can be either undernourished or overweight. They include stunting, wasting, and underweight/overweight (Nutrition Landscape Information System and World Health Organization, 2010; see WFP, 2015).

Stunting

Stunting develops gradually, during the first 1,000 days of life beginning at conception. It has severe and lifelong outcomes that are irreversible, and these go beyond physical effects in terms of size, but also affect cognitive development and short and long term health – these can have implications on future generations as well. Stunting represents a failure to reach the height expected for a healthy child of the same age, and measures long-term chronic undernutrition. It is measured by height for age (HAZ), and occurs when the HAZ value is < -2 standard deviations from the World Health Organization (WHO) Child Growth Standards median (Nutrition Landscape Information System and World Health Organization, 2010; Smith & Haddad, 2015; see WFP, 2015; 2015).

Wasting/Acute malnutrition

Unlike stunting, wasting develops quickly and can be reversed, and is a result of a rapid weight loss or inability to gain weight. It often occurs in emergency situations when there is a sudden food scarcity. It is measured by weight for height (WHZ), when the WHZ value is < -2 standard deviations from the WHO Child Growth Standards median, as well as the mid upper arm circumference (MUAC), and can be categorized as moderate (MAM) or severe

(SAM) (Nutrition Landscape Information System and World Health Organization, 2010; WFP, 2015; see World Food Summit, 1996).

Underweight

Underweight reflects both stunting and wasting, as it indicates that a child is not consuming adequate calories for healthy development. It is measured by a weight for age (WAZ) calculation, when WAZ is < -2 standard deviations from the WHO Child Growth Standards median and it indicates chronic and acute malnutrition (Nutrition Landscape Information System and World Health Organization, 2010; WFP, 2015).

Micronutrient deficiency

Micronutrient deficiency occurs when individuals do not consume enough vitamins or minerals (micronutrients) that are essential for proper growth and metabolism. It is often referred to as ‘hidden hunger’ because it can occur when people are consuming the necessary amount of calories, but not enough micronutrients; this affects both morbidity and mortality and has life long consequences not just on health but also on cognitive and economic development (WFP, 2015).

Human Development Index

A measure of human development created by the United Nations, which aggregates values of three indicators: life expectancy, education level and per capita income. This measure is created for the country level, and countries are ranked into four categories: very high, high, medium, and low human developments (*Global Health Observatory Repository*, 2015).

Dietary Diversity

Refers to the number of different foods consumed during a specific time period.

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1. INTRODUCTION

1.1 Overview

In July of 2015 the Millennium Development Goals (MDG)¹ reached their end-date, and final reports indicate that sub-Saharan Africa still has the highest proportion of hunger by region in the world: 23 percent of the population of sub-Saharan Africa is undernourished (a 10 percent decline over 15 years) but the number of undernourished has increased by 44 million since 1990 (United Nations, 2015). The region also has the highest level of poverty with the lowest reduction rate: 41 percent still live on less US\$1.25 a day (United Nations, 2015). Further, farming represents an important livelihood and income source, as nearly 60 percent of individuals living in sub-Saharan Africa are employed by the agriculture sector (Cheong & Jansen, 2013). Some nations in particular suffer from extremely high population densities in rural areas, which combined with the prevalence of farming leads to variations in farm sizes and levels of soil degradation (see, for example, (World Bank, 2015)). It is in this context that resettlement appears as an approach to reducing poverty and increasing food security for land-scarce rural farmers in developing nations.

Land reform in general, for which resettlement is one strategy, it is commonly promoted by the World Bank, and uses several tactics to improve well-being including land redistribution as previously mentioned, and land titling. However, success in land reform is difficult to achieve: not only does it require land in settlement areas and often entails complex logistics and high costs, but also presents some risks for participants, including inadequate market access, a decrease in social capital, loss of livelihood opportunities, conflict with new host communities and related lack of in social capital that occurs when individuals are living apart from their community (Borras, 2003; Cousins & Scoones, 2010; De Wet, 2012; Scoones, 2009; see Sikor & Müller, 2009). These downfalls have been highlighted in the past, but generally focus on the explicit project objectives, which can often be broad and intangible.

The focus of this thesis is a land reform initiative, the Community-Based Rural Land Development Project (CBRLDP) that took place in Malawi; it was unique in that it offered

¹ The Millennium Development Goals are quantified targets set by the United Nations to end extreme poverty by 2015 in eight separate categories.

both formal property rights as well as land redistribution through a willing-seller willing-buyer mechanism but was also touted as being ‘voluntary’ and community-based. In the case of resettlement, migration can be voluntary or involuntary (resulting from conflict or resettlement for infrastructure projects, for example). The Project studied here clearly fits into the category of voluntary resettlement, as enrollment and the act of moving was freely made by participants. While the project was voluntary according to the standard definition provided above, a key component of a programmes voluntary nature is that all parties are aware of the nature of the agreement, and as such have informed consent. The crux of the issue explored in this thesis is whether such information was provided and/or understood by participants, and therefore whether the programme can truly be called voluntary.

The CBRLDP moved 15,000 low-income farming households internally within southern Malawi between 2004 and 2011, where participants received larger land plots in order to increase income and agricultural productivity. The CBRLDP represents a new trend in development in general, and in resettlement more specifically, as it falls under the World Banks’ “Local and Community-Driven Development” (LCDD) umbrella that tries to use a bottom-up approach that is inclusive of local populations (Binswanger-Mkhize, de Regt, & Spector, 2009b). Though the CBRLDP has been the subject of a few recent studies, in general they focus on data from midway points and on the specific objectives (landholdings and farm productivity), ignoring secondary effects (see Mendola & Simtowe, 2015; Mueller, Quisumbing, & Lee, 2014). Given the relative newness of LCDD within land reform, few studies have taken a beneficiary² perspective to study consent in participation and fewer still have looked at the causes of withdrawal explicitly. Though food security is affected by land reform, particularly as participants are predominantly farmers and subsist on the food they produce or rely on the income from agriculture sales, direct food security assessments, specifically related to nutrition, are often lacking. It is important to understand the various direct and indirect outcomes of the project on participants in particular, in order to add to the global understanding of such ‘community-based’ initiatives as they gain momentum in development practice.

² In keeping with land reform rhetoric, this thesis refers to participants as ‘beneficiaries’, however it is important to acknowledge that this piece critically examines whether or not participants truly did benefit from resettlement. The term beneficiary is not neutral, however in this context we do not assume that beneficiaries viewed the programme positively or not, rather it is used to incite critical reflection.

1.2 Research Objectives

This thesis has four research objectives, which contribute to the global understanding of the outcomes of voluntary resettlement. The questions addressed in the analytic chapters are:

1. To what extent was the CBRLDP program ‘voluntary’?
2. What are the real and perceived land tenure claims established by the program?
3. How do Kudzigulira Malo³ ‘beneficiaries’ view the outcomes of their resettlement?
4. How effective is voluntary resettlement as a policy to reduce rates of food insecurity?
 - a. Specific effects on nutrition (dietary diversity)

Chapter 2 addresses questions 1-3 through an analysis of the factors influencing household participation in resettlement and attrition rates, from discussions with beneficiaries and former-beneficiaries, as well as an assessment of the voluntary nature of the project. Chapter 3 targets question 4 through analysis of food security indicators, as well as regressions of individual dietary diversity scores comparing the nutrition of beneficiaries and non-beneficiaries.

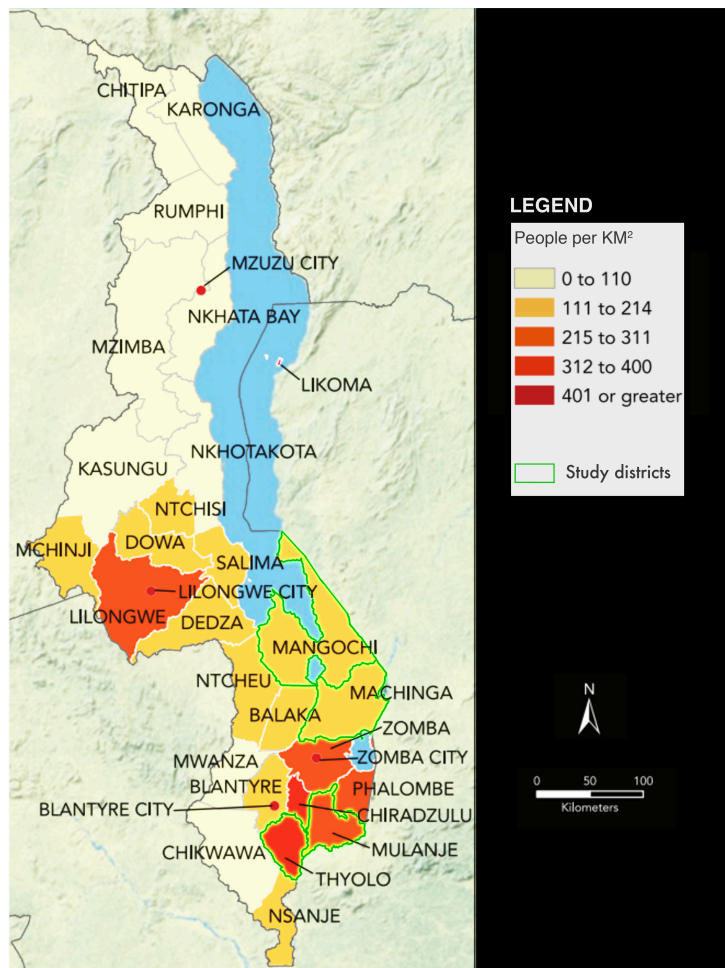
1.3 The Malawian Context

Malawi is a small landlocked nation in South-Eastern Africa, where agriculture is a key feature of the economy. Malawi’s population is among the most rural in the world (The World Bank, 2015c), with over 80 percent of its 16 million inhabitants living in rural areas (Government of Malawi, 2010). It is particularly susceptible to food insecurity caused by economic or climate driven shocks, as the agricultural sector employs roughly 80 percent of the population (OECD, UNDP, UNECA, AFDB, 2012) - accounting for 38 percent of the gross domestic product (Government of Malawi as cited in Mendola & Simtowe, 2015; Tchale, 2009). Further, only 5 percent of farmland is irrigated, and the majority of that irrigation occurs on sugar estates, increasing farmer vulnerability to drought (Reynolds, 2000). The country also faces severe population pressures as density approached an average of 175 inhabitants per square kilometre in 2014 (The World Bank, 2015d), making it the ninth most densely populated country in Africa (The World Bank, 2015d), and an estimated 70 percent of small scale households cultivate less than 1 hectare (Chirwa & Matita, 2012;

³ The Community Based Rural Land Development Project is referred to as Kudzigulira Malo in Chichewa.

IFAD, 2011). Land holdings in the Southern, and most populous, region are as low as 0.1ha per capita (Tchale, 2009), and Thyolo districts' density is near that of Rwanda, which is the most densely populated country on continental Africa (343 people per sq. km and 395 people per sq. km in 2008 respectively) (The World Bank, 2015d). Figure 1.1 below is a map of Malawi's population density by region, with the four main resettlement districts (Machinga, Mangochi, Mulanje, Thyolo) highlighted in green – these are discussed in section 1.4.

Figure 1.1 - Map of Malawi with District Level Population Densities and Study Sites Included in the Research



Source: Modified map from (AFIDEP & PAI, 2012), with data from (National Statistical Office, Government of Malawi, 2008).

Figure 1.1 clearly demonstrates an unevenly distributed population density, which leads to high rates of conflicts in some of the Southern districts, both between small-scale farmers and estate owners (Jul-Larsen & Mvula, 2009; Peters & Kambewa, 2007). Because of extreme population pressure in Malawi, particularly in the south, farmers face depleting soil

fertility (Sauer & Tchale, 2009), and are cultivating land on hilly slopes, expanding into woodlands, or onto land that is unsuitable for farming (Place & Otsuka, 2001). As the majority of households participate in farming for livelihoods, they rely on their crops for food and income: small landholdings could result in reduced net production due to size restrictions, particularly where soil quality is poor. This could negatively affect consumption and food security, where there is less food available to sell and consume.

This situation explains, in part, high levels of extreme poverty. A 2005 government survey found that 52 percent of the population was living under the poverty line (determined to be USD145 per person per year⁴, significantly less than USD1.25 per day), with a rate of 60 percent in the Southern region (Government of Malawi, 2010). The United Nations Development Programme HDI Report ranked Malawi's development amongst the lowest in the world, at 170 of 187 countries worldwide in 2013 (Malik, 2013), and it fell four places to 174 of 187 in 2014 (United Nations Development Programme (UNDP), 2014). Though it is far from a detailed analysis of a country's progress, the HDI, which measures human development by assessing the growth of a country beyond simply economic progress (see the Glossary), serves to provide a basic method to compare human development across countries. Malawi's low ranking indicates that the aggregate of mean life expectancy, years of schooling, and standard of living (gross domestic product per capita) is lower than 173 other countries in the world, indicating a relatively poor level of human development. The high levels of extreme poverty, undernutrition, population density and dependence on agriculture provide the context for the implementation of a resettlement programme that addresses poverty and issues of land conflict.

1.4 Case Study: The Community-Based Rural Land Development Project

The World Bank has an extensive history in land reform, including several instances of success and failure, which are reviewed extensively in Chapter 2. As for the positive outcomes, the World Bank saw what Dininger & Binswanger (1999) refer to as 'success' in the 1970s in Asia and in Kenya's "million-acre-scheme", however those offered some fundamental differences from the CBRLDP in terms of design. For example, though the million-acre-scheme, like CBRLDP, purchased land from white European farmers to sell to

⁴ Calculated given an exchange rate of 110MWK to 1USD in March of 2005

landless impoverished Kenyan farmers, the Kenyan settlers had to pay for the plots themselves and assume a debt, rather than receive a grant as in Malawi's case (Leo, 1981). In regards to land titling, the World Bank has maintained its strategy valuing formal land ownership for marginalized communities despite some variations in policy over the last 40 years. The CBRLDP is one of the World Bank's several land reform projects, including the Access to Land Pilot Project in Honduras and the Land-Based Poverty Alleviation Project in Brazil, that emphasized a community based approach to land reform, as opposed to a gender or environmental protection focus, for example.

The CBRLDP, was a US\$37.9 million World Bank funded project that took place in Southern Malawi between 2004-2011. The project funded the resettlement of 15,000 impoverished households who had little or no land, to underutilized cultivable areas through rural to rural in-country voluntary resettlement. Participants were necessarily landless or land poor, and if they held land, it would have been under customary ownership. It provided beneficiaries with the funds to move and purchase two-hectare plots (per household) on defunct tobacco estates, with the goal of increasing incomes, and agricultural productivity (The World Bank Independent Evaluation Group, 2013). These funds included a cash grant from the World Bank of US\$1,050 per beneficiary household, paid in three tranches to the beneficiaries directly, where each house was to spend 30 percent on purchasing the land,⁵ 10 percent was designated for transport and shelter, and 60 percent would be used towards farm development (The World Bank Independent Evaluation Group, 2013).

While in their place of origin, beneficiary households were required to assemble into groupings, also known as 'trusts', of 20-30 households and elect representatives who would negotiate the purchase of the plot. All households within the grouping resettled together, however they were discouraged from moving with family members in households beyond the immediate, and were supposed to gain collective ownership of the land in the form of a group title deed (The World Bank Independent Evaluation Group, 2013, p. 8). They were also supposed to receive some training regarding negotiation for the purchase, in addition to

⁵ The ownership rights provided by this project are complex and under-documented, however, through the research undertaken here it appeared as though the name of one member of each household was on the title deed, and as such ownership was collective. Ownership is described in more detail in Chapter 2 of the manuscript.

capacity building of farm management practices (The World Bank Independent Evaluation Group, 2013). As such, it was “the first redistributive land reform project to be implemented in the Africa Region and it was the first in the world to use World Bank funds for land acquisition” (The World Bank Independent Evaluation Group, 2013 p. ix). Through grants to purchase land, and training and inputs needed to establish viable farms, the project aimed to raise the income of poor farmers (ibid p. ix). The majority of resettlement took place within four districts located in Southern Malawi: Machinga, Mangochi, Mulanje, Thyolo, but two other districts (Ntcheu and Balaka) were added later. Initially, households moved from either Mulanje or Thyolo to either Mangochi or Machinga. Later, some households were included that moved entirely within the resettlement districts of Mangochi and Machinga. Table 1.1 below gives a generalized overview of the characteristics for each district; it is clear to see that the resettlement districts (Machinga and Mangochi) are distinct from the districts that many of the participants came from (Mulanje and Thyolo). The trusts generally moved into former plantations where existing communities were already living; this posed potential problems particularly over cultural differences, sharing resources, and where beneficiaries had to conform to a new traditional authority as ‘outsiders’.

Table 1.1 - Malawi District Characteristics

	Mulanje	Thyolo	Mangochi	Machinga
Sending/Receiving	Sending	Sending	Sending and Receiving	Sending and Receiving
Infrastructure	Good	Good	Very poor	Poor
Env. characteristics	Lush green forests	Lush green forests	Dry; sandy soil	Dry; sandy soil
Livelihoods	Tea; factory; farm; cash crops; piecework; tourism	Tea; factory; farm; cash crops; piecework; tourism	Fishing; farming; pastoralism; piecework	Fishing; farming; piecework
Ethnic group	Lomwe	Lomwe	Yao	Yao
Religion	Christian	Christian	Muslim	Muslim
Kinship	Matrilineal	Matrilineal	Matrilineal	Matrilineal
Population density (2008)	254 per km ²	342 per km ²	127 per km ²	130 per km ²

Source: Based on information in (National Statistical Office (NSO) & ICF Macro, 2011).

1.5 Methodology

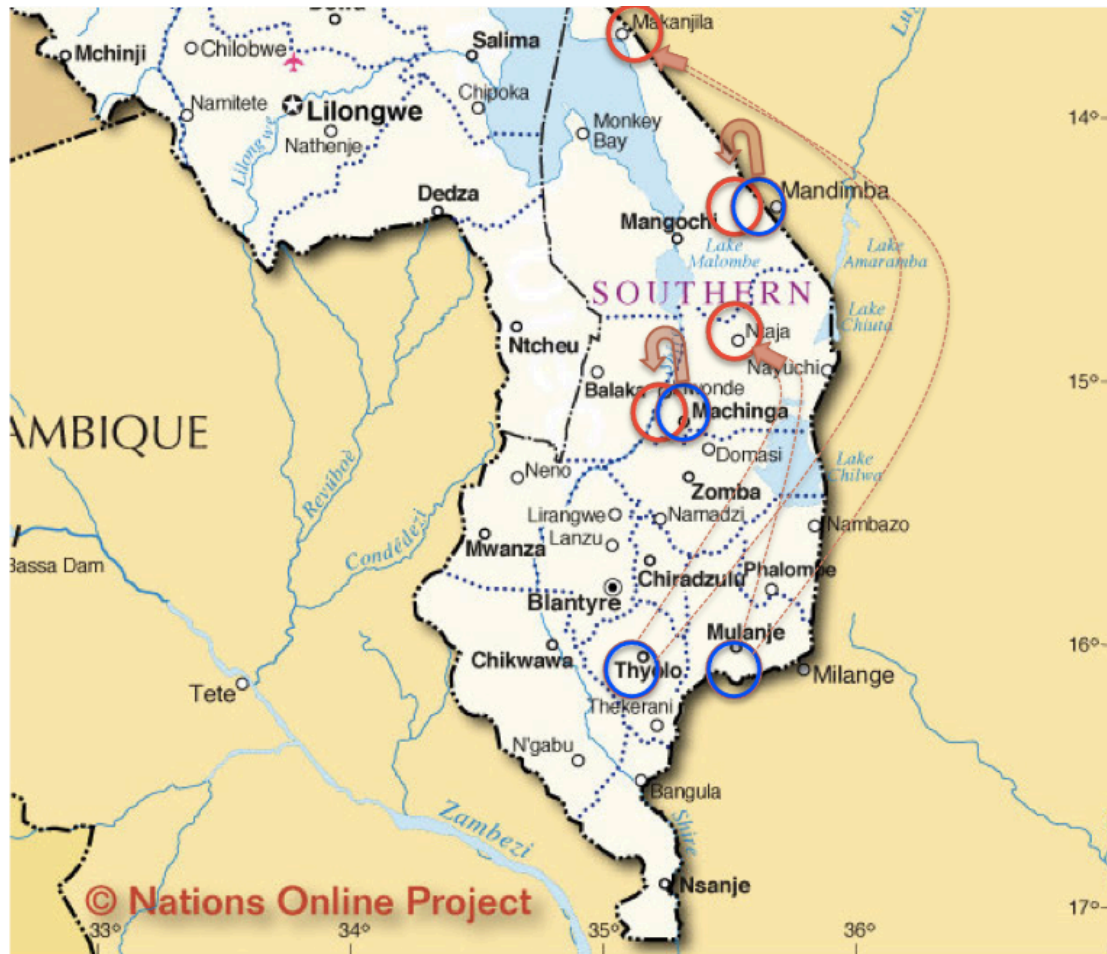
The empirical data presented here is based on four months of collection from May-September 2014, across Southern Malawi. Data was collected in the form of semi-structured interviews, a survey of CBRLDP participants, and focus group discussions. The theme of the data collection tools was based on the aforementioned research questions, particularly surrounding issues of food security, inclusion/participation, land tenure and perceptions of the resettlement site. The data collection was led by Kelly Sharp with the help of five local research assistants. Prior to commencing research in any of the sites, the research team first asked for permission and waited for approval from local authorities and traditional leaders.

19 in-depth interviews were conducted with government officials, academics, and project officials, as well as with select beneficiaries. These interviews were each about one hour in length and were conducted in English or Chichewa depending on the preference of the interviewee; they were led either by Kelly Sharp or a research assistant based on the language. The interviews were split into semi-structured and open-ended. The semi-structured interview participants were selected for their experience implementing the project and the majority were identified prior to beginning data collection, though a few were found through snowball sampling. The open-ended interviewees were often identified by their community as an important individual (Trust Chairman, for example), or were beneficiaries who self-identified during the survey as wanting to expand on their experiences. The majority of semi-structured interviews took place prior to the survey, and the open-ended interviews took place during the survey.

The survey questionnaire was developed based on the results of the semi-structured key-informant interviews. The questionnaire was pre-tested with beneficiaries who were not included in the official sample population; it was then revised, and then translated from English to Chichewa, and back-translated from Chichewa to English to ensure that the sentiments of the questions were captured in the translation. The survey data included responses from 203 households, who were all beneficiaries of the CBRLDP programme and were living at their resettlement site during the time of survey. Roughly fifty, or one quarter, of the respondents sampled came from each of the core districts of origin within the

CBRLDP: Machinga, Mangochi, Mulanje and Thyolo. Figure 1.2 below marks the migration pattern of the beneficiaries, where blue indicates their location of origin, and red mark their resettlement site. The team traveled to resettlement locations, which were chosen to represent a diverse set of Traditional Authorities, wherein some were remote and others were close to a main road (in order to address the reported differences in infrastructure access), and the beneficiary groups were then randomly selected within classifications of remote and central areas, providing they fit the district of origin criteria. Within chosen beneficiary groups, research assistants skipped every two homes in order to randomly sample one third of the homes in the group. The data collected in the surveys included information on perceptions of land ownership, inclusion and participation, livelihoods, and withdrawal rates.

Figure 1.2 - Map of Southern Malawi with Location of Sampling Sites



[Modified map based on a map from (Nations Online Project, n.d.)]

After the questionnaires were conducted, the respondents were asked to take another brief

but validated survey known as the household dietary diversity score (HDDS), which takes roughly ten minutes to conduct and is an indicator of household food security. HDDS scores were modified using a validated summation in order to calculate the individual dietary diversity score (IDDS), which represents individual level dietary diversity. The HDDS, IDDS and their collection methods are described in detail in Chapter 3.

The format of the survey was consistent with the 2010 Malawi Demographic & Health Survey design (National Statistical Office (NSO) & ICF Macro, 2011). The survey collected demographic and socio-economic status information, including age, gender, education, assets, and livelihoods. Beneficiary group characteristics, and perceptions of: participation, land ownership, access to infrastructure, inputs/outputs, and the programme, were asked in binary yes/no (1/0) format, or in close ended multiple choice with an option for 'other' and 'don't know'. Data regarding attrition was collected by asking respondents how many individuals were in their original beneficiary group, how many they thought had left the site, and where they thought those who left went. The final question was open ended and asked for any further comments regarding the project or their experience with it.

Based on the information collected in the interviews and questionnaires, two sets of focus group discussion (FGD) questions were created: one set of focus group questions targeted former CBRLDP beneficiaries who had moved back home to their district of origin, the other set of questions were written for individuals who were eligible to participate in CBRLDP but chose not to. The conversations were open ended but guided by the questions, and individuals would be prompted to clarify or expand where necessary. Three FGDs were held with former beneficiaries only, and two were with non-beneficiaries only and were held in Mulanje or Thyolo; at least one type of FGD took place in each district in order to represent the potential differences between districts. The composition of the groups were mixed in gender and age in order to obtain a range of perspectives, but chiefs or leaders were not included to give respondents the space to speak freely, and had between six and ten respondents. FGD locations were selected for being questionnaire respondents' villages of origin. In some cases, the research team was unable to get approval from the local traditional leader, or was unable to locate the exact village of origin, and so the discussion took place in a neighbouring village.

We conducted five focus group discussions: two were with households eligible for the CBRLDP whose neighbours joined, but who elected not to participate; these took place in Mulanje and Thyolo. The other three focus group discussions were with former CBRLDP beneficiaries who withdrew after resettlement; that is to say, individuals who joined to program but then returned home to their District of Origin. Two of the focus group discussions with former beneficiaries occurred in Mulanje in their village of origin, and one took place in Thyolo. Questions in the FGDs with former beneficiaries were designed to understand why they left the resettlement site, how much understanding they had of the programme before joining, and their perceptions of the programme and of their resettlement site. FGDs with non-beneficiaries were designed to understand external perceptions of the project, and why they elected not to participate.

Uniquely, the information gathered within this study provides a critical glimpse into the status of beneficiaries three years after the programme ended, as most studies were conducted during the course of programme implementation. It also provides a voice to those who elected not to join, and those who abandoned their resettlement site.

All questionnaires, HDDS surveys and focus group discussions were conducted in Chichewa, and were translated into English with the help of the team of research assistants. The data-collection tools are included at the end of the thesis in the Appendix.

1.6 Thesis Focus and Contents

This thesis critically examines the voluntary nature of ‘voluntary’ resettlement (as defined in Section 1.1), as well as its effects on food security and dietary diversity. This research contributes to the greater understanding of land reform, community-driven development, and land reform within community-driven development. The latter is relatively new in development policy but is gaining traction and thus deeper understanding can help to improve development policy that assists communities facing food insecurity and poverty. Specific knowledge gaps in this field addressed by this research include: understanding consent, effects of food security, and attrition rates related to resettlement. The first chapter outlined the contextual background for the thesis as well as data collection tools. Chapter 2 questions the notion of ‘volunteering’ to resettle, through a broader study of factors influencing household participation in the resettlement scheme. Included in this chapter are

participant perceptions of their new tenure security, and factors that lead to withdrawal. Chapter 3 focuses on the level of food security and dietary diversity of project participants, which have a clear and direct link to the project goals of improving income and agricultural productivity. The final chapter summarizes the findings and outlines areas for future research.

2. Moving Home: Factors Influencing Household Participation in and Withdrawal from Voluntary Resettlement in Malawi

2.1 Introduction

In the decades following independence, governments across Southern Africa have engaged in various forms of land reform. Their efforts can be seen as attempts to rectify the vast disparity in access to land that resulted from racial colonial laws removing land from native inhabitants and transferring it to white settlers. Though varied in approach, these land reform efforts share a common focus on increasing food security and reducing rural poverty. Past reforms within Southern Africa have been extensively studied, most notably in South Africa and Zimbabwe (Bernstein, 2003; see Moore, 2005), yet there remains some understudied aspects and projects. This includes factors influencing the participation and withdrawal of low-income households in large-scale land reform schemes, voluntary resettlement schemes in particular. This paper assesses those factors through the study of a large-scale World Bank-sponsored resettlement project in Malawi - the Community Based Rural Land Development Project (CBRLDP).

Implemented between 2004 and 2011, the project aimed to increase the income level and agricultural productivity of impoverished rural small-holder farmers through voluntary resettlement from densely populated rural areas to the mostly vacant land of bankrupt tobacco farms. According to the World Bank's own project type denomination, this resettlement was deemed to pursue a Local and Community Driven Development approach by providing access to larger land plots and formalizing land tenure on a community basis (The World Bank Independent Evaluation Group, 2013). The objective of this chapter is to assess factors influencing household participation and withdrawal in the resettlement scheme, as well as to understand households' level of informed consent in the resettlement process. Findings from this study emphasize the need for enhancing the voluntary character of such resettlement schemes, as well as the need to provide improved living conditions and, not simply more land for participants.

Various forms of land reforms have occurred for decades across the world, and have been studied from a critical perspective for just as long (Borras & McKinley, 2006; Cousins &

Scoones, 2010; De Wet, 2012; Sikor & Müller, 2009). This study contributes to debates about land reform, specifically in the form of ‘voluntary’ resettlement, in three ways. First, despite numerous critical analyses, few empirical studies have specifically examined factors behind the attrition rates of resettlement scheme beneficiaries. Attrition rates constitute a complex proxy for assessing the satisfaction of participants with a resettlement scheme given the numerous elements that contribute to a decision to stay or leave. A nuanced view of factors influencing attrition rates can inform policy, as it can provide insights into participant’s satisfaction, which is critical for sustainable resettlement. Second, the study examines the level of informed consent by participating households and their perceptions of tenure security in a formalized yet ‘community’ based ownership system, both of which are relatively novel concepts within World Bank resettlement schemes (Deininger & Binswanger, 1999) and remain understudied. Finally, as this is one of the only studies to use data that was collected following the closure of the CBRLDP in Malawi: it provides original empirical data to understand attrition rates among participants for this specific project and context.

Based on 19 in-depth interviews, five focus groups, and a survey of 203 households conducted in Malawi in 2014, the research seeks to better understand factors influencing rural households to participate in and withdraw from the resettlement project, as well as to critically examine the notion of ‘voluntary’ resettlement. Following this introduction, the various types of land reform are defined through a brief literature review, and a background to the CBRLDP is presented. The tools of analysis are outlined in section 4, and section 5 includes the results of the analysis. Conclusions state that there was an inadequate informed consent process for participants to truly understand where they were moving, which coincided with a lack of understanding of the official status of ownership of resettled land. A number of direct and indirect reasons that led participants to withdraw or remain in the resettlement site are also presented, most prominently the ability to produce and sell crops, and the characteristics of the district of origin. We suggest that a better grasp of these factors, and inclusion of improved practices in future projects, could lead to more sustainable and genuinely ‘voluntary’ resettlement, that would likely reduce attrition rates and better benefit the targeted population.

2.2 Literature Review

Land reforms can be executed through a variety of strategies and have frequently been carried out with support of the World Bank (Manji, 2006). The World Bank's approach in this regard is that "land is a key asset for the rural and urban poor", and that the association of secure land rights and low land transactions costs for the poor open economic opportunities and foster development (Deininger, 2003 p. xvii). Historically, the World Bank's policies were outlined in the 1975 Land Reform Policy Paper, where they promoted family farmers, egalitarian distribution, and highlighted the importance of secure land rights. Nearly 25 years later a revised approach added that communal tenure systems can be more cost effective than formal titling and that land reform must be decentralized and use markets to reduce poverty (Deininger & Binswanger, 1999). They argued for titling to promote investment incentives as well as providing collateral, and established 'community-based' redistributive land reform, where the government has a limited role and participants are incentivized to buy run down land and increase the productivity (Deininger & Binswanger, 1999). However, their policies were not without critique, and the Bank has a checkered past with some successful projects such as in Bolivia providing title to poor and indigenous communities, and heavily critiqued ones such as in the Philippines, where they 'undermined' the government redistributive reform to implement a Bank led reform (Borras, Carranza, Franco, & Manahan, 2009). With this historical World Bank approach in mind, the following section provides an overview of land reform, the notion of consent and volunteering within land reform, and the role of land tenure in resettlement schemes.

2.2.1 Livelihoods in Land Reform

Before reviewing the literature on land reform generally, and land history in Malawi specifically, it is important to provide some context to understand the end-goals of such land reform programs. For the CBRLDP, the primary goal was poverty reduction through the mechanism of improved livelihoods. This was expected to result from resettlement to larger plots and more formalized land titling. It is also important to note that funds for infrastructure were not provided as part of the project, and but were rather the responsibility of a separate agency, the Malawi Social Action Fund, which terminated its activities as CBRLDP resettlements began. Therefore, the majority of beneficiary groups were without basic

infrastructure such as water and roads (The World Bank Independent Evaluation Group, 2013).

Within scholarship, approaches to understanding livelihoods advocate for a more multi-faceted approach. For example, according to the Sustainable Livelihoods Approach (originally cited in Carney, 1998; De Haan, 2000; Scoones, 1998) five resources are needed to achieve sustainable livelihood: human capital (e.g. labour and skills), natural capital (e.g. land), physical capital (e.g. food stocks and tools), financial capital (e.g. money), and social capital (e.g. family support). This theory acknowledges the importance of social relations, which may be used to explain why individuals may choose to resettle or engage in circular migration (A. de Haan, 1999), and the importance of diversified livelihoods (Aliber, Baiphethi, de Satge, Denison, & Hart, 2009). Additionally, households in southern Africa are now commonly seen viewed as having multiple livelihoods, as they diversify beyond agriculture (Bryceson, 2002; Murray, 2002).

Through the use of these theories, this thesis is mindful of the findings of Cousins & Scoones (2010), who criticize the competing measures of six major conceptual frameworks used to assess the viability of land reforms. They argue that these frameworks, which are tools employed to evaluate the main tenants of land reform, including: the productivity of land, the role of food production on household welfare, and the multiple sources of livelihoods for programme beneficiaries. Because they are narrow and technocratic, these frameworks have led to overlapping and occasionally contradictory framings of viability. Conscious of this critique, this chapter focuses on the factors influencing household participation and withdrawal, which can provide nuanced insight to programme viability as it addresses participant satisfaction and is not limited to conclusions based solely on whether land holdings increased or changes in agricultural output. The analysis examines internal and external push and pull factors influence these decisions at three different levels: reasons to join, engagement and consent, and the decision to leave.

2.2.2 Overview of Land Reform⁶

Land reform has recently re-appeared in the development spotlight, after an initial debut in the 1950s and later made popular by the World Bank as a strategy to reduce poverty, provide land security, and/or to increase food security. It can manifest in a variety of ways ranging from land tenure reform, such as the registration of customary land rights to secure property rights, to land redistribution where land is transferred, for example, from large to small farmers (see Ngaido, 2004; van den Brink, Thomas, Binswanger, Bruce, & Byamugisha, 2006). Land redistribution, defined as land-based wealth transferred from landed classes to landless or near-landless poor (Borras & Franco, 2010, p. 17), can be divided into two categories: market-driven and state-led. State-led reforms involve the government organizing to provide land to rural farmers, who are not necessarily well organized, in an attempt to redistribute economic power (Borras & McKinley, 2006). These have been highly criticized, for a limiting, top-down, bureaucratic approach that excludes community from the process, though they have seen some successes particularly in Japan, the Republic of Korea, and Taiwan (Borras & McKinley, 2006; Bouquet, 2009; Sikor & Müller, 2009).

Other studies have focused on the effects of state-led land reform in Southern Africa as it relates to livelihoods. Deininger et al. (2004) compared beneficiaries with a control group of non-beneficiaries who were eligible to participate in Zimbabwe's resettlement program but elected not to, and found that the economic return to resettlement was positive, but modest (an additional US\$17 per annum). Kinsey (1999) also found that incomes and material well-being amongst Zimbabwe's resettled population increased over 6 and 9 year periods respectively. However, others such as Sikor & Muller (2009) and Bouquet (2009), outline the limits of state-led reform as they fail to incorporate realities from the ground, and create a reliance on bureaucratic processes, and can create a market for informal land transactions.

⁶ A note about terminology: Land reform, including land tenure reform and land redistribution are highly complex domains, with many overlapping characteristics, and for that reason the terminology can be both vague and complex. For the CBRLDP specifically, the World Bank referred to the project as a "decentralized, community-based and voluntary approach to land reform" (Ministry of Lands Physical Planning and Surveys, 2003, p. 1). In this paper, following section 2.1 outlining land reform, we have elected to use the term "voluntary resettlement" in an effort to reduce ambiguity. Voluntary resettlement is often used in the context of development initiatives that displace individuals for large projects such as infrastructure or conservation; however, its definition precisely identifies the terms of resettlement, explained in more depth in section 2.2.

Market-driven redistributive land reform offers an alternative that is seen more positively as it supposedly requires consenting parties, though this is difficult to ensure particularly where communities lack knowledge of land laws. It is based on a principle of ‘willing-seller willing-buyer’, and commonly occurs as part of a pro-market critique of state-led top-down approaches, and most notably took place in Brazil with the Market-Led Agrarian Reform (Borras, 2003; 2002).

Critics of resettlement-based land reform cite lack of planning, lack of infrastructure and lack of participation as causes of program failures, particularly as they can result in a decline in livelihoods. De Wit (2012) acknowledges the propensity for resettlement projects to leave participants worse off, for a variety of reasons. He analyses villagization projects (resettlement to a centralized area with distinct residential, arable and grazing areas) in South Africa and Zimbabwe, and concludes that restoring livelihoods should be included within resettlement policy with three central pillars: to avoid and minimize resettlement, to promote participation and consultation, and to provide affected parties with at least equivalent or better standards than what they had before resettlement (*ibid.*). Though villagization projects can be involuntary, they share similarities with voluntary resettlement initiatives as in the case of Zimbabwe Fast Track Land Reform Program (FTLRP). Scudder (1991) suggests that in the case of the FTLRP, the government played a critical role in providing conditions for beneficiary success by *not* prohibiting the private sector from establishing services, which promoted entrepreneurship to meet rural needs (De Wet, 2012). However, although beneficiaries were initially better off than they were before the resettlement, their success petered out after government support decreased, until their livelihoods resembled those of spontaneous settlers (Chimhowu & Hulme, 2006). Based on the risks and vulnerabilities that beneficiaries faced, Chimhowu & Hulme (2006) advocate for such land reform policies to be modeled after livelihood frameworks, recognizing that small-scale farmers need and want to have more than one income source in order to reduce risk, and that previous planning that narrowly focused on natural capital alone negatively affected the ability of participants to succeed.

Above all, Bernstein (2003) cautioned that despite the potential for benefits, they should not be assumed, and implementers of land reform initiatives need to be aware of the costs. In that

sense, costs include: loss of employment, political marginalization, loss of productive capacity, and its effects on economic activity (ibid.). Borras (2003, p. 389) echoes the downside of assumption within these strategies where: not all peasants (often incorrectly profiled as one homogenous group) and landlords want to become willing sellers or willing buyers; the provision of information and financial assistance does not correct for unequal distribution of political power; and decentralization does not guarantee transparency and accountability. Further, a lack of natural resources in the new location also contributes to the demise of a resettlement initiative. Cousins argues that though expanded access to land and water are both necessary in order to improve the incomes of small scale farmers, they are insufficient to ensure successful resettlement: he uses a case in Tugela Ferry, South Africa, to demonstrate the critical role that cultural contexts play, where he exemplifies how property rights are culturally embedded and can prevent individuals from obtaining land (Cousins, 2013). Other areas to strengthen programmes include: decentralizing decision making, strengthening accountability, and allowing for community procurement of goods and services such that communities can manage their own resources (van den Brink et al., 2006).

Resettlement initiatives within land reform have been well documented, however few studies critically examine the factors influencing participants to join or leave a resettlement project, as well as their engagement in the resettlement process.

2.2.3 Volunteering to Resettle

If the *voluntary* character of resettlement is widely understood as a major factor in the success and ‘viability’ of land reform (Cousins & Scoones, 2010), the term itself is open to varying interpretations, and the ways it is contrasted with *forced* resettlement. Though those two terms may seem obviously distinct, without informed consent and thus a complete understanding of the process, participant volition comes into question.

Involuntary resettlement in the context of development initiatives, such as infrastructure projects or irrigation systems, can be viewed as a tragic irony as they are designed to reduce overall poverty, yet they “dismantle the economic bases and livelihoods of the populations that are displaced” (Cernea, 2003, p. 37). More broadly, Cernea (2004) argues that impoverishment is the risk of development, and proposes an “Impoverishment Risks and Reconstruction Model” based on eight interconnected risks associated with involuntary

displacement: landlessness, joblessness, homelessness, marginalization, food insecurity, increased morbidity, loss of access to common property resources, and community disarticulation. For example, community, or social, disarticulation occurs as forced displacement separates communities, which disrupts what Cernea refers to as “life sustaining informal networks” of mutual service, and that net-loss of social capital has long-term consequences for natural, physical, and human capital (Cernea, 2004). Though this example is used within forced resettlement discourse, it is easy to see that it could occur in voluntary migration as well.

Voluntary resettlement is a lesser-studied field, and fundamentally differs from involuntary resettlement in that participants ostensibly have a choice, although many of the outcomes can be similar. Voluntary resettlement is “resettlement not attributable to eminent domain or other forms of land acquisition backed by powers of the state”, and is only possible if the project’s (resettlement) location is not fixed (The World Bank, 2004); that is to say, affected parties are not forced by a governing body to relocate. The World Bank (2004, p. 21) identifies the two crucial components of voluntary resettlement as *informed consent* (wherein the people involved are “fully knowledgeable about the project and its implications and consequences” and freely agree to participate), and *power of choice* (wherein participant “have the option to agree or disagree with the land acquisition without adverse consequences imposed formally or informally by the state”). Voluntary resettlement is similar to migration in that sense: individuals or family members will migrate in the face of negative pressures (e.g. agricultural stagnation, mismanagement of land, high population pressure), which paradoxically can cause a decline in social cohesion, but migration can also be an example of agency and empowerment for migrants (A. de Haan, Brock, & Coulibaly, 2002).

Within land reform, voluntary resettlement often occurs within market-driven land reform. Under this model, one of the methods to ensure that resettlement is voluntary, is to use the willing-seller willing-buyer approach, such that both seller and buyer are engaging in the process without coercion (Borras, 2002). Both Zimbabwe and South Africa are viewed as failed examples of this type of reform (Peters, 2009, p. 1319) as they were carried out slowly and did not adequately provide tenure.

2.2.4 The Role of Land Ownership in Voluntary Resettlement

The vast majority of land in sub-Saharan Africa is under customary ownership (Deininger, 2003, p. 62), a context that complicates both market and state driven land reforms. There is much debate within the literature regarding the benefits of customary versus private ownership for rural farmers in the developing world. In 1975, the World Bank published its “Land Reform Policy Paper”, advocating for owner-operated family farms, a position reinforced by de Soto (2000) which championed individual property rights.

The World Bank perspective of the role of private property rights in relation to equity and efficiency was summarized by Deininger (1999, p. 249), who argued that secure individual private property rights would “not only increase beneficiaries’ incentives and provide collateral for further investment but, if all markets were competitive, would automatically lead to socially and economically desirable land market transactions.” Similarly, the Land Management Paradigm argues that land administration and titling are necessary for social equality and economic growth (Williamson, Enemark, Wallace, & Rajabifard, 2010). As such, it has been suggested that a lack of collateral will prevent households from making investments (in livestock, schooling, etc), which precludes their opportunity to be productive (Deininger & Binswanger, 1999; Galor & Zeira, 1993). de Soto (2000) therefore characterized customary land as ‘dead capital’ as individuals are unable to use their land as collateral for loans. This sentiment is reinforced by incidences of land loss and lack of women’s rights within customary systems (Whitehead & Tsikata, 2003).

Assumed agricultural and economic stagnation associated with customary land rights are two of the main justifications for land titling initiatives. However it is important not to overlook the downsides of land titling and the potential for negative consequences. Opponents of Western style titling argue for customary tenure and against legal registration. One of the most prominent arguments is that land titling reform utilizes a narrow construct of formal legality, where it assumes that formal title is superior to social norms in effectively functioning land systems (Musembi, 2007). However, empirical evidence has proven that formal title does not guarantee access to credit (Chimhowu & Woodhouse, 2006; Musembi, 2007; Pinckney & Kimuyu, 1994). This notion is reinforced by Mitchell (2004) who argues that formalizing property undermines smallholder investments such as crops and livestock,

rather than empowering them. Additionally, researchers have indicated that current titling systems are fundamentally unable to provide security, as land registries are weak (Bryant, 1996) and formalizing property rights does not promote lending to the poor (Kingwill et al., 2006). Further, Van den Brink et al concluded that there is no longer a consensus that official title deeds are necessary, as “title deeds themselves do not create secure property rights from an insecure situation” (2006, p. 12).

Lastarria-Cornhiel (1997) refutes the idea that private ownership for disadvantaged individuals, such as women, will provide land security and investment incentives. Rather, women and ethnic minorities lose the few rights they had to land in the transformation from customary to private law, as they are not able to claim ownership rights though this is not always the case and gender-based land reform initiatives can, in some instances, provide women with increased rights, as in the case of Bolivia with the 1997 *saneamiento* national titling programme (Lastarria-Cornhiel, 2006). Finally, arguments for land reform that includes titling ignore the fact that it not only brings some form of secure tenure, but also creates new forms of insecurity. Formalized land titling, for example, tends to see a decrease in the importance of local social networks to help secure land tenure, while generally excluding seasonal rights to land (e.g. firewood, grazing etc.) that constitute important ‘safety-nets’ for low-income households (Chimhowu & Woodhouse, 2006). Land security is of high importance to farmers, as they need to be certain that the maize they planted will belong to them after harvest, but it is important to note that land tenure is an outcome of not just policy but also culture (van den Brink et al., 2006).

Following negative results and failed attempts at titling in a few key areas such as South Africa, the World Bank shifted its focus in order to support formal ownership while maintaining some customary rules, where they promoted community tenure systems rather than individual (see Deininger & Binswanger, 1999). Similarly, the importance of community participation and engagement re-enters the land reform rhetoric here: land tenure practices that follow principles of engagement and existing local tenure systems, could be more successful than those that do not. In Mexico, Bouquet (2009) found land titles to enhance security of tenure where it incorporated existing practices on the ground (in this case, *ejido* – a community land-ownership system), as opposed to bureaucratic western style

titling. Such findings emphasize the importance of community engagement in land reform practices.

2.3 Land in Malawi and the CBRLDP

2.3.1 Setting the Stage for the CBRLDP: A Brief History of Land Law in Malawi

White settler rule in Southern Africa, and in Malawi in particular (starting in 1891), left a legacy of unequal and discriminatory land ownership policy that continues to pervade tenure debates today (Kanyongolo, 2008). Their interests focused on white economic enterprise by putting land directly in the hands of settlers, and as a result laws dispossessed African people from their land and removed their tenure security such that they were dependent on the colonial government. Malawian lack of rights were further exacerbated in the 1920s with institutionalized racial inequality, where the Land Commission believed that European settlement to Nyasaland⁷ would stimulate development and progress (Kanyongolo, 2008; Pachai, 1978). From colonial times, Southern Malawi was at the centre of land disputes: both the majority of colonial settlement took place in this region, but this region also had the highest population density (Kanyongolo, 2008, p. 90). Though attempts at inclusive laws were created during the years directly following de-colonization (1966/1967, amended in 1970), the reforms still focused on agricultural productivity and failed to address the legacy of landlessness. The newest transformative phase of land reform began in 2002 with the Malawi National Land Policy. For the first time it recognized that land was more than just an economic resource: that it was also a political and social entity (Kanyongolo, 2008), however the implementation of these laws is lagging (Chinsinga, 2011). Despite the lag, the Community Based Rural Land Distribution Project was born out of this change in thinking.

2.3.2 Summaries of Relevant CBRLDP Findings

The CBRLDP has been the subject of several studies, each focusing on different aspects of the programme. Most recently, Mendola and Simtowe (2015) published an article on the CBRLDP, using survey data collected in four rounds from 2005-2009, finding that the project had a positive causal relationship to increased asset holding, food security, land holdings, agricultural output, maize and tobacco production, and agricultural income levels.

⁷ Nyasaland was the colonial name for Malawi.

Their findings indicated that income levels increased as a result of the project, however incomes were much higher in the first year after receiving the project funds than subsequent years. Despite the positive effects, they found no or negative changes on: input use, household expenditure on different goods and services, as well as access to social services, including a modest increase in time to reach water services (ibid).

Mueller et al (2014) studied the effects of the project on food security and land property rights. They concluded that the project had positive long-term effects on both, but found that only about one third of respondents had title deeds (ibid). They question who would own the land if the beneficiary group left, as the program was designed such that households were not moved with extended family beyond the immediate household. Beneficiaries had higher incomes despite control populations having a livestock growth rate of 223 percent (versus the 93 percent of beneficiary households), and they found beneficiaries to be more vulnerable to floods and to the 2010-2011 food crisis.

In terms of land ownership, the World Bank promoted group titles, where ownership was held as a trust rather than as an individual or household. Additionally, one design purpose listed in the CBRLDP implementation manual lists is to give beneficiaries the ability to select the style of land ownership that they preferred: “Beneficiaries will decide the property regime under which they will hold the land (leasehold, freehold or customary estate) after adequate orientation” (Ministry of Lands, Housing and Surveys, 2005, p. 4). However, a 2011 project evaluation claimed that land could either be registered as freehold or leasehold (Simtowe, Mendola, & Mangisoni, 2011 p. 13), and Mueller et al. (2014) were unable to discern which style beneficiaries chose. This discrepancy regarding choice in land ownership is also reflected in the 2013 independent evaluation, where there was no discussion of choice, but rather an implication of the temporary nature the deeds, where beneficiaries were required to hold the land for five years, after which they could pursue individual title (The World Bank Independent Evaluation Group, 2013, p. 8). The lack of understanding surrounding the programmes’ effects on land ownership is addressed in this paper, where we demonstrate that beneficiaries were not given a choice, and beyond that, the titling was much more complex than the implementation manual let on. Further, Mueller et al (2014, p. 225) also pointed out that “it remains to be established how much resettlement affects land

ownership”, and as well, their study was unable to establish whether beneficiaries had group or individual title: the following chapter illustrates the type of ownership that was created as a part of the project. Finally, in terms of attrition, an earlier study by Mkamanga & Chimutu (2008) claimed that there was a relatively low withdrawal rate: 9.8 percent of beneficiaries withdrew based on a selection of 56 trusts. However those statistics are now outdated, up to date figures with current rates are needed; this is one of the most significant gaps in the CBRLDP follow-up as attrition serves as an indicator of beneficiary satisfaction, and reflects which location they perceive has the best livelihood opportunities. This research will fill the gap in attrition data, and will explain the complex narrative of ‘moving home’.⁸

Despite the CBRLDP being the subject of many studies, none have focused on the question of ‘volunteering’; therefore, it is difficult to ascertain the extent to which participants were truly involved in the purchase of land and other decision processes. It is unclear how beneficiaries were consulted, trained, and how able they were to make ‘free and informed’ choices. This lack of clarity is addressed in this study, where we assess levels of informed consent and factors affecting decision-making at various points during participation.

2.4 Data Analysis Methods

A mixed methods approach was used to collect and analyze the data in order to provide both a broad overview, as well as a more in-depth understanding of programme perceptions and viability. Mixed methods studies are often seen as providing offsets to the weaknesses of both qualitative and quantitative research (Creswell & Plano Clark, 2011; see WFP, 2015). Qualitative data allows for participant voices to be heard; however, due to the openness of responses and reliance on the researchers interpretation, conclusions can be affected by the researchers experience and perception, more so than in closed-ended quantitative studies that attempt to control for bias (which are themselves less informative about social realities).. Of course, mixed methods studies are often more time consuming and resource intensive than other data collection strategies, however in this circumstance, multiple sources were more appropriate and illustrative given the nature of the topic.

All quantitative analysis was done in Stata, including summary statistics, Kruskal-Wallis and

⁸ The narrative of ‘moving home’ refers to participant decisions to stay on or leave the resettlement site and return to their village of origin.

Mann-Whitney tests for attrition data, and ordered logit regressions for the IDDS data described in chapter 3. All qualitative analysis was done using Nvivo in two rounds: the first round of coding included Descriptive and open Initial Coding, and the second round used the first set of codes to look for pre-determined themes (Marshall & Rossman, 2011).

2.5 Analysis

According to the World Bank's own criteria, voluntary resettlement projects are to abide by two principles: power of choice and informed consent (The World Bank, 2004, p. 21). Power of choice occurs when participants have the ability to agree to or reject the land acquisition, and this can only occur when the location of the land is not pre-determined and fixed. Informed consent in this context refers to when project participants are fully knowledgeable about the resettlement and its consequences. The following section assesses participant perceptions of their engagement and informed consent in the process, which works to critique the voluntary nature of the project.

The empirical analysis was conducted in order to understand the factors influencing participation, engagement and levels of informed consent in decision-making processes during implementation, and the factors influencing withdrawal for participants of the CBRLDP. The analysis is then divided into chronological time periods. Firstly, we establish the reasons participants gave for joining the project. This is followed by an assessment of the levels of informed consent amongst beneficiaries, including by an examination of the difference between real and perceived formalized land ownership status. Finally an assessment is made of attrition rates as well as factors contributing to decisions to stay or leave the program.

2.5.1 Factors Influencing Individuals to Join the CBRLDP

Beneficiary motivations for joining the project were examined in order to provide an understanding of conditions in the villages of origin, which will also affect decisions to remain on the site or leave after moving. Figure 2.2 below graphically represents the 12 reasons participants gave to the open-ended question, "Why did you choose to participate?" The majority (75 percent) stated a lack of land in the district of origin was the main motivating factor, followed by the related claim that there was conflict over land in the

district of origin (9 percent). In fact, many of the other 12 reasons were related to the low quality or lack of land. Indeed, the CBRLDP provided beneficiaries with more land, which, if scarce in the district of origin, would have been a clear incentive to join and later to stay.

Figure 2.1 – Beneficiary Motivations to Join CBRLDP

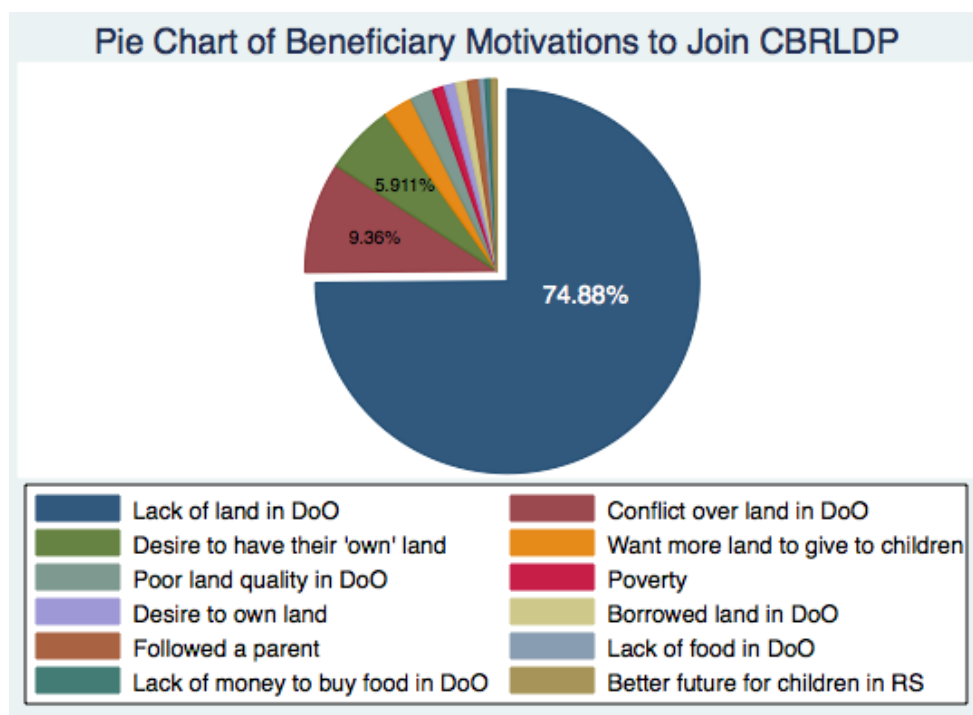
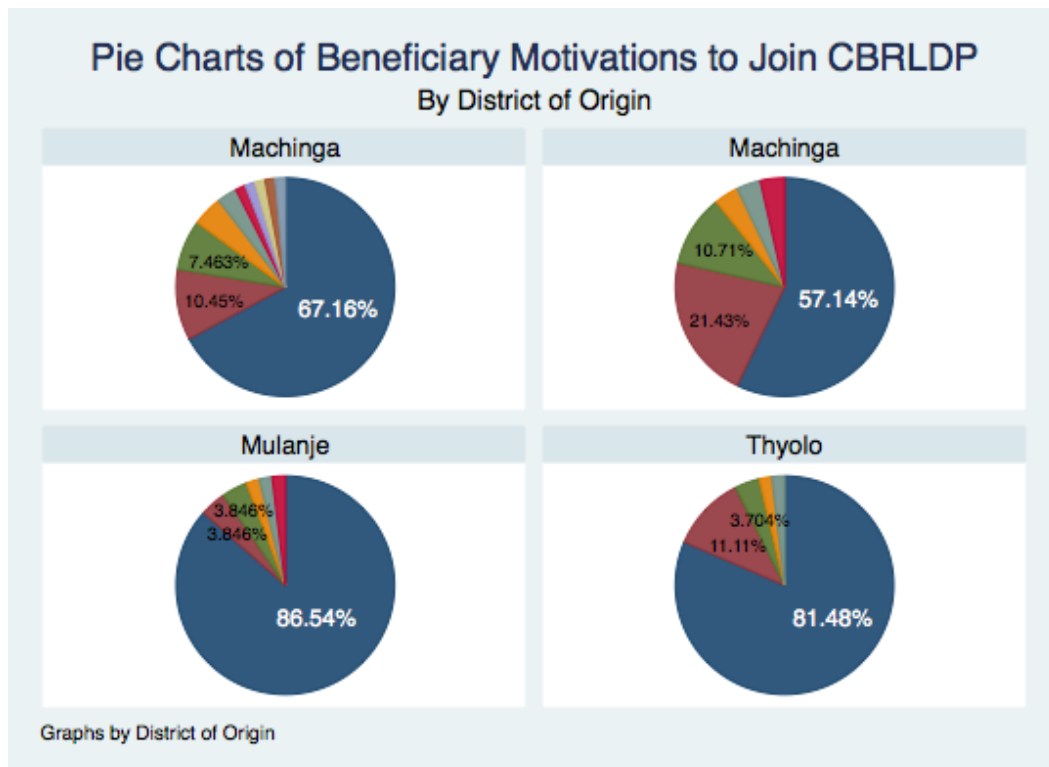


Figure 2.3, which uses the same legend and data as Figure 2.2, separates the responses by district of origin. This is used to elucidate the conditions specific to each district. Nearly 20 percent more respondents from Mulanje and Thyolo cited a lack of land in the district of origin as the motivator for moving. This is likely reflects the high population densities of Mulanje and Thyolo, which are among the highest densities in Malawi. More individuals from Machinga and Mangochi brought up conflict over land, desire to have their own land, as well as the numerous other responses than individuals from Mulanje and Thyolo did. District specific population densities and their effects on resettlement are discussed in depth later in this section.

Figure 2.2 – Beneficiary Motivations to Join CBRLDP by District of Origin



No matter the district, reported motivations to join were still for the most part due to a lack of land in the district of origin.⁹ The project intended to address this by providing more land in the new site; a site that beneficiaries were to choose for themselves. This ‘choice’, is examined below.

2.5.2 Perceptions of Inclusion and Decision-Making in the CBRLDP: A Reflection on ‘Voluntary’ Resettlement

A key component of voluntary resettlement is beneficiary participation and inclusion – noting that we use this term for individual households and not for communities (as discussed below, community-level participation and inclusion is frequently biased in favor of the views and interests of community leaders, raising concerns for those of the poor households within a community). In this regard, individual households must have full informed consent in order

⁹ This response may have been guided by the respondents’ knowledge that the CBRLDP was motivated, at least in part, by a concept of relative land scarcity, and as such some respondents may have reasserted the projects rationale rather than their own. However, in-depth interviews did not seem to confirm that possibility, and attrition rates were higher among participants originating from districts with mid-levels of population density. This suggests that land scarcity was a genuine motivation, at least among the participants originating from the more densely populated regions.

to decide if they want to participate in the resettlement initiative. But voluntary resettlement also includes a “power of choice.” Power of choice is designed for beneficiaries to have agency over the characteristics over their future home, particularly the resettlement location and it is “only possible if the project location is not fixed” (The World Bank, 2004, p. 21). As such, participants should be able to choose the location of their new home. Though both of these tenets are examined here at the individual level, as part of the CBRLDP design, individuals had to give over some of their decision-making to representatives, and these representatives did not always have substantially more access to information than the other beneficiaries. Therefore, one must be cautious of the mechanisms to transfer decision making, and be aware that someone with decision-making power does not necessarily have adequate information. This section first analyses the beneficiaries’ perceptions of their engagement in location selection, and then examines the level of consent through analysis of focus group discussions with former beneficiaries focusing specifically on the case study of land ownership.

2.5.2.1 Perceptions of Choice in the CBLRDP

Power of choice is fundamental to all voluntary resettlement initiatives and indeed the element of choice was included within the CBRLDP program design such that implementers were to “ensure that beneficiaries play a key role in land identification and implementation of farm development activities” (Ministry of Lands, Housing and Surveys, 2005, p. 6). Despite the claim of the Project Implementation Guide, the 2013 independent evaluation suggested that it was up to the executive committee to identify the lands (The World Bank Independent Evaluation Group, 2013, p. 7). Given this finding, this research aimed to assess whether or not participants were indeed given a choice of location prior to resettlement.

In terms of enrollment in the project, beneficiaries had to self-select and register. Thus enrollment was voluntary by design, and cases of forced enrollment would have been exceptional and were not found during this research. Focus group discussions with non-beneficiaries showed that they did have a choice in deciding not to register, citing reasons such as already having enough land or that they heard rumours of a lack of infrastructure in the new location. However, power of choice comes into question during the land acquisition process.

Though power of choice is a critical component of voluntary resettlement, feelings were mixed amongst beneficiaries regarding their engagement in the process. 52 percent of survey respondents said that they did not feel included in the decision to choose the location of resettlement, while 48 percent felt they were. However, there was more disagreement amongst participants about *who* made the decision regarding the location. See Figure 2.3 below.

Figure 2.3 – Histogram of Who Decided the Location of the Resettlement Site

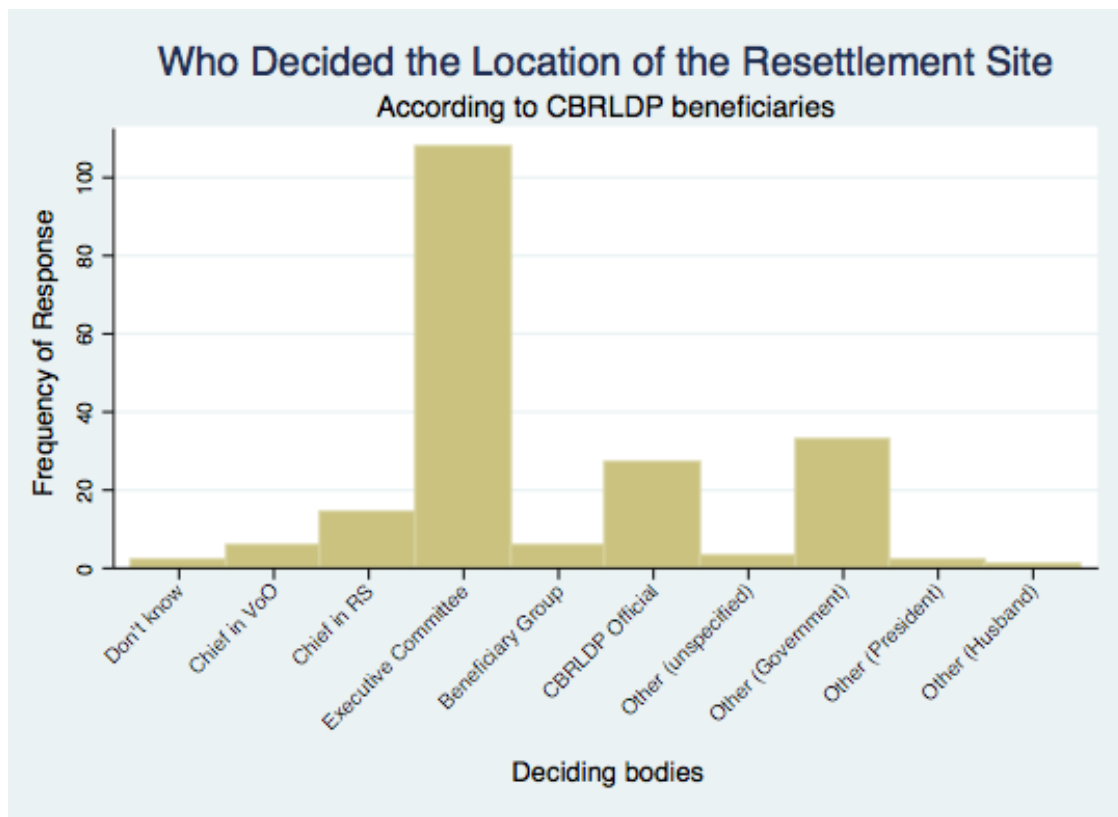


Figure 2.1 illustrates beneficiary responses to the question “who made the decision regarding the location of the resettlement site?” 53.5 percent of respondents stated that they believed the Executive Committee made the decision. This was followed by 16.3 percent and 13.4 percent who believed it was the Government and CBRLDP Officials respectively. Only 2.97 percent of beneficiaries surveyed perceived that *they* made the decision. The experience of the participants is clearly misaligned not only with the goals of the CBRLDP implementation (where participants were free to choose where they moved), but also with the spirit of voluntary resettlement itself. In the definition of voluntary resettlement, ‘power of choice’

refers directly to a choice in land acquisition, and as such the choice of the land itself is a critical indicator of the voluntary nature of the project. According to the reports of the beneficiaries interviewed here, the majority were not involved in the decision process (raising the possibility that there were also other areas where beneficiaries were excluded from participating as well). In this sense, it is misleading to refer to the project as being entirely ‘voluntary’ as based on 2004 The World Bank definition.

Beneficiary satisfaction of the location was examined to determine if there was a relationship between inclusion and satisfaction. Though only half the participants stated like they had input in the decision of the location of the resettlement site, 98.0 percent of all respondents answered that they were happy with the location, and 91.9 percent said that they believed plot distribution on the site itself was fair. Respondents indicated that the plot distribution was done in a democratic way (through methods such as drawing straws and picking numbers as cited within the survey responses). This could mean that participation is not always necessary for satisfaction, however, it is important to note this sample represents only the individuals who remained on the site, and participants who were unsatisfied with the land or other factors could have left. Focus group discussions with former beneficiaries confirmed a sense of dissatisfaction amongst those who left, including complaints about poor soil quality, lack of access to water, schools and hospitals, and the threat of wild animals. Below is an excerpt of a focus group with former beneficiaries, who shared their experiences of choice and quality of land:

[Chichewa]

Participant 7: What made me what to come back [to my village of origin] was that I was given rocky land and that movement was very difficult for me, [for example] hospitals were far. And there was also the problem of water.

Participant 9: Maize mills were far so you needed a bicycle to go there.

Participant 3: There were rocks so it was difficult to cultivate.

Facilitator: So before you went you hadn't heard how the place was?

Participant 6: The people who went to search for the land were forced to comment that the land is good and say there were hospitals, schools and maize mills, but when we went it was like we were on an island.

Participant 5: When the committee members were taken to see the land they were just shown one place, whether it was a wetland area they had no choice but to take the land. [The project officials] could show them only the good land but not the rocky

area. Had it been that the committee was given the choice to choose good land, the land could have been good.

(Focus group #1, former beneficiaries, 28 July 2014).

This confirms the survey results that only committee members were taken to view potential land for purchase, but also brings into question the nature of the choice itself. Based on the results of the focus group even committee members were not given options with regard to the larger plot for their beneficiary group, and they had to take the only option shown to them. However, results from the focus group discussions also suggest that often the households within the beneficiary group drew numbers from a hat in order to choose their individual plot, which points to some equity at the community level.

2.5.2.2 Disparate Expectations and Informed Consent: Beneficiary Perceptions of Site Conditions Pre and Post Resettlement

Notions of consent were also investigated, as they are one half of the components of ‘voluntary settlement’. This was done through focus group discussions, where former beneficiaries were asked about what they had heard of the programme prior to joining. Many of the respondents brought up discrepancies between what they were told and the reality when they arrived regarding the location and quality of land they received. Specifically, several explicitly state that project officials told them that the land would be good, and even that they would produce more maize which they would be able to sell or trade. None claimed that they had been informed of the lack of infrastructure and many explained this discovery with surprise. For example:

[Chichewa] “They said that we were going to be given enough land, big land, and if we go we will be producing more, but when we went there we were only producing four bags of maize. ...I need to have money to buy [my children] clothes so I need to sell some maize, and for us to eat fish I need to exchange it with maize. It was difficult, and they lied to us that the land is near the road but when we went there if we wanted to go back home we had to travel a long distance. It was difficult.” (Focus group #1, former beneficiaries, 28 July 2014).

Other respondents reiterated sentiments of deception, that the government had misled them, particularly in regards to the quality of land.

[Chichewa] “What we heard is different than what the government promised us. Before we left the committee met to discuss the things that they were going to find when

they went to [assess] the land. When the committee members went there with the officials to see the land, they saw an area that has good soil without seeing the bad areas. When the executive committee came back from the estates, they were telling the members that it was good land, and also that the government had promised us that they will give us money. Everyone planned that when we got there we would grow crops and the government would give us money, but when we arrived we were not paid for four months and we had to go look for piecework, but the non-beneficiaries chased us away thinking we were thieves. Had it been that the government paid us every month we would not have gone back [to the village of origin].” (Focus group #1, former beneficiaries, 28 July 2014)

The issue of the location of the land was heavily integrated into notions of being misled and not knowing what their future conditions would be like. One participant had the following to say:

[Chichewa] “What I see is that the government thought it was something good for us, but it wasn’t really. Like the story about land, when we saw that it was not good land we went to the ministry office, and we went to the office often. When we raised our land problem to them, they answered us that the government bought that land for us to settle. From my side, I thought that the government could have taken [at least] two people [to assess the resettlement site] to help each other see the land if it is good or not before taking beneficiaries to that land. If they have seen that the land has a problem, they should have done something like change the land and take people to another land that is better. But what they were saying was to tell us ‘you should just be living and working hard in growing cassava’. We were not able to think wisely. But had it been that they changed us to good land I hope all of us here could have [stayed].” (Focus group #4, former beneficiaries, 31 July 2014).

These quotes highlight a lack of informed consent amongst former beneficiaries explaining their surprise and disappointment at resettlement site conditions, and in many cases, at project officials who had promised them conditions better than what they found. This indicates a clear lack of informed consent about the quality of the land and site of resettlement. As the section below explains, there was also a lack of informed consent with regard to the land ownership rights for project participants, with major differences between perceived and actual land ownership rights provided by the programme.

2.5.2.3 Informed Consent Within the CBRLDP: An Analysis of Perceived and Actual Land Ownership Rights

“Property rights should be clearly defined, well understood, and accepted by those who must abide by them” (van den Brink et al., 2006, p. 46).

The CBRLDP not only provided recipients with larger plots of land to increase their agricultural productivity, but also with formalized land ownership, which according to de Soto, would help lift recipients out of poverty through increased ability to invest (de Soto, 2000). The notion of land ownership within the CBRLDP has been described as one of the most understudied elements: Mueller et al (2014, p. 224) observed that one of the “key insights missing from prior analysis of the project is the impact of resettlement on land security”. Though Mueller et al (2014) did address the tenure issue to some extent, their study was gender-specific and did not account for the general experience of participants regarding their new formalized land ownership. This section assesses the effect the program had on real and perceived land ownership for participants, and thereby informs our study of informed consent.

As noted above, the benefits of formalized land ownership is contested. However, in practice, transforming land from customary ownership to individual, ‘official’ ownership has been a central tenet of World Bank efforts on land reform and is seen as necessary for small-scale farmers to lift themselves out of poverty. Prior to the CBRLDP, land ownership within Malawi was split into three categories: customary, leasehold and freehold, which are defined in Table 2.1 below. In theory, the CBRLDP was designed to provide beneficiaries with a choice between these three types of ownership (Simtowe et al., 2011 pg. 17). However, Mueller et al (2014, p. 224) observed that “relatively [little] is known about how [these choices] were formally described and presented as options to individuals within the beneficiary group”. This research seeks to fill that gap.

Table 2.1 - Pre-CBRLDP Land Ownership Types

Customary	Leasehold	Freehold
Rural small-scale farmers (Majority of land in Malawi)	Estate Land (8% of land in Malawi)	Foreign commercial plantations (Very small portion of land)
Government owned	Individually owned for a period, then returns to government	Privately owned
Claims not legally recognized	Claims legally recognized	Claims legally recognized

After analyzing relevant publications (specifically (The World Bank, 2012; The World Bank Independent Evaluation Group, 2013)), and communicating with government and former

project officials on the ground, it appears that the CBRLDP did not offer these three types of ownership, but rather created a new type of land ownership within Malawi that took the form of group leasehold. Firstly, beneficiaries were all assigned group land title through which the beneficiary group (rather than individuals) shared a title deed (The World Bank Independent Evaluation Group, 2013). This deed appears to be in the form of leasehold, where the beneficiaries inherited the lease of the former estate owner, and as such lease lengths and durations would vary on a case-by-case basis, with some that could have already expired (Ministry of Lands Officer, personal communication, 2 July 2015). Table 2.2 below includes the details of the previous types of ownership, with the addition of group leasehold. An independent project evaluation found that group title was a sufficient short term solution, as homeowners could apply for individual deed, provided that they had adequate finances (The World Bank Independent Evaluation Group, 2013).

Table 2.2 - Ownership Types in Malawi Following the CBRLDP

Customary	Group Leasehold	Leasehold	Freehold
Rural small-scale farmers (Majority of land in Malawi)	CBRLDP Land	Estate Land (8% of land in Malawi)	Foreign commercial plantations (Very small portion of land)
Government owned	Group owned for a period	Individually owned for a period, then returns to government	Privately owned in perpetuity
Claims not legally recognized	Claims not legally recognized	Claims legally recognized	Claims legally recognized

2.5.2.3.1 Perceptions of Ownership Status

Given that beneficiaries were supposed to have a choice, this survey asked them to identify the type of ownership they had in their village of origin, and as well as in the resettlement site. Their answers are listed in Table 2.3 below. 79 percent of respondents said they had customary land in their village of origin, and 13 percent said they only borrowed land. This is logical given that the vast majority of land held by small scale farmers in rural Malawi is customary ownership (Chirwa, 2008), and such high population densities could result in many individuals borrowing. These figures therefore indicate that the beneficiaries had a good understanding of what type of landholding they had in their village of origin. Rightly

so, the majority of participants believed that their ownership type changed through the CBRLDP. Nearly 20 percent did not know what type of ownership they had and 72 percent of beneficiaries perceived that their ownership was individual freehold. The fact that a fifth of the respondents were unaware of their land ownership status, a critical element of land reform, indicates issues with the level of informed consent. Just as problematic an issue is that the vast majority of respondents incorrectly identified their ownership status as the beneficiaries received group leasehold. This reflects a lack of participant understanding, echoing sentiments previously discussed earlier in this section, regarding the misunderstanding of the future resettlement site characteristics. Furthermore, nearly all respondents (93 percent) expressed a preference for individual freehold ownership. Given the language used in the CBRLDP programme documents regarding ownership – that 30 percent of the household grant was to purchase land – it is not necessarily surprising that such a high percentage of respondents believed that they had freehold ownership. Again, this is problematic, as some participants knew what they wanted but not what they had in terms of ownership while others were under the false impression that they had their preferred form of ownership. For the latter participants, this could provide a false sense of satisfaction, and in the event that they need to defend their land they may not know what their rights are. This could also lead participants to stay on their land in the hopes that they could one day sell it and that likely will not be possible under this system particularly as the land is leased as a group, thus requiring group consent.

Table 2.3 - Beneficiary Perceptions of Land Ownership Type

	Type of ownership in Village of Origin	Type of ownership in Resettlement Site
<i>Don't know</i>	0.00%	19.21%
<i>Customary</i>	79.21%	0.99%
<i>Individual/Freehold</i>	1.98%	71.92%
<i>Individual/Leasehold</i>	0.00%	0.99%
<i>Group/Freehold</i>	0.00%	4.93%
<i>Group/Leasehold</i>	0.00%	1.91%
<i>Did not have land</i>	5.94%	--
<i>Borrowed</i>	12.87%	--

According to Simtowe et al (2011), one of the nine core principles of the CBRLDP was that

participants should have a choice in the type of land ownership. We thus asked beneficiaries about such choice, and found 92 percent of the 203 respondents stating that they had not been given a choice (see Table 2.4). As mentioned earlier in this chapter the majority of beneficiaries interviewed, particularly those not part of the Executive Committee, did not have a deep understanding of the project in terms of where they were moving and what the conditions would be like. This finding, along with the number of beneficiaries who were satisfied with their type of ownership indicates that given the choice they would have chosen individual freehold land over group leasehold. This again sheds light on the lack of involvement participants had in pre-resettlement decision-making, as well as a lack of informed consent.

Further, given the importance placed on title deeds in poverty alleviation by the World Bank, this study sought to find out if the beneficiaries did in fact have deeds. According to our survey responses, three years after the termination of the project, just over half (55 percent of respondents) stated that they did not have the deed. This is in contrast to the baseline data collected in 2008 that argued that of the 666 beneficiary groups surveyed, 641 had received group land title (The World Bank Independent Evaluation Group, 2013, p. 16), and 89 percent of 551 beneficiary groups in 2009 (The World Bank, 2009). Despite high percentages of issued deeds, both reports acknowledged delays in issuing the deeds prior to data collection, as well as for post mid-term delays, when the majority of resettlements occurred. However, our findings are more in line with the findings of Mueller et al in 2014, according to which only 36 percent of respondents claimed to have a title deed, but they were unable to discern if title was individually owned or in a group; further, the ownership rate was only 18 percent more than the control non-beneficiary population (Mueller et al., 2014).

There are several factors that could have contributed to the aforementioned discrepancy between reported deed holders within our study and that of the 2008 mid-term studies, and those are speculated below. First, it could be related to a decline in issuance of titles in the final years of the project (The World Bank Independent Evaluation Group, 2013, p. 30) when the majority of the beneficiaries moved. Similarly, land could be registered at the Ministry's office, but copies of the deed might not have been delivered, particularly to remote communities. Another, perhaps less likely, possibility was that the issued deeds had been lost

or destroyed in an accident; though there were a handful of such reports found during this research, it could not account for such a large discrepancy. It could also be that the beneficiaries interviewed did not have it in their possession, as there was only one deed and it was usually kept at an executive committee member's home; as such they may not have perceived they had access to it.

2.5.2.3.2 Understanding and Valuing the Title Deed

The concept of land ownership was unclear for both deed holders and those without. Firstly, the respondents expressed confusion in understanding the deed itself. The Chairman of one trust responded to the question, "Does each house have a title deed?" [*Chichewa*] "*There is one book with the treasurer. But it's written in English so we don't understand it*" (Beneficiary Chairman, personal communication, 30 June 2014). In a country where the majority of the rural population has primary education only (only 18 percent of women and 27 percent of men have some secondary education) and has basic reading skills or does not speak English (National Statistical Office, 2011), the details of a legal document such as this one would, of course, be difficult to understand. This confusion is illustrated in a variety of ways: firstly, for those who did not have the deed, there was a lack of understanding of when they would receive it. Secondly, the type of land ownership was unclear. Other individuals believed that the land titles that they had were temporary, and that they would receive official ones later (Beneficiary, personal communication, 26 June 2014).

In regards to the timeframe to obtain the official deed, respondents in all three of the focus group discussions with former beneficiaries expressed a perception that they first had to live on the resettlement land for five years before they would be given legal tenure. For example, [*Chichewa*] "*The elders who went to the training they said that the land is yours after five years; ...after staying there for five years that land would be yours*" (Respondent #4, focus group discussion #3, former beneficiary). Similarly, another respondent in focus group discussion #4 described the same sentiment: [*Chichewa*] "*When we went for the training at Mangochi we were told that a person should stay for 5 years at that land, then they shall receive the ownership land*" (Respondent #1, focus group discussion #4, former beneficiary). None of the project evaluations or mid-term reports mentioned a time minimum of stay in the resettlement site before titles could be issued. There was however, a provision that

beneficiary groups could not “dispose of their land in the five years after it was allocated to them” (The World Bank Independent Evaluation Group, 2013, p. 8), which was not defined and could refer to giving land to neighbours, or selling it. This is potentially the point of confusion for the beneficiaries regarding their ownership status.

Given confusion over time and the deed itself, this study also sought to find out how the participants valued their deeds. Though the vast majority (93 percent) of respondents stated that having the title deed was important to them, this is possibly a construct of the CBRLDP itself. The ability to own land only accounted for 6 percent of participants when explaining the main motivating factor for choosing to join the CBRLDP (see Figure 2.1). Therefore, though it may be a bonus for participants, it is clearly not the most important feature of the programme. Further, the desire to have a deed may have deepened once the beneficiaries arrived at their new site. To illustrate this is, one beneficiary’s response to the question: “What would you do with the title deed? Why is it important to you?” He explained in Chichewa “[*The title deed*] is important because we don’t know the chief here. He isn’t a chief from my traditional authority [*of origin*]. Now, no one can tell us to move” (*Beneficiary group 2 secretary*). In other words, a title deed was perhaps not necessary before in places of origin given the social capital and customary rights that come along with community and a sense of permanence. Suddenly, after resettlement, the title deed becomes of great value given their insecure position within the new community, refuting the assumption that customary law offers no security. Resettlement provoked the need for a ‘modern’ tool of land security, one that – critics argue – in fact exacerbates the vulnerability of landholders to dispossession, often as a result of over-leveraging and loan defaulting.

Table 2.4 - Beneficiary Responses to Perceptions of Land Ownership

	<i>Don't know</i>	<i>Yes</i>	<i>No</i>	<i>N/A</i>
Current type of land ownership is the preferred type	--	92.57%	7.43%	--
Given a choice regarding the type of land ownership	--	7.88%	92.12%	--
Have title deed to CBRLDP land	--	45.32%	54.68%	--
Having the title deed is important	--	99.01%	0.99%	--
If you have the title deed, have you used it to get a loan	0.99%	2.46%	41.38%	55.17%

Proponents of official land titling for their potential to provide collateral for a loan (de Soto, 2000); therefore, beneficiaries would ideally be using the land in this way. However, only 5 respondents out of 203 (2.5 percent) said that they used the title deed to obtain a loan. If the beneficiaries are not using their deeds for loans, what does a title deed offer them? In the case of the CBRLDP, the title deed is not legally binding, as it is not recognized by current law: “The absence of individual title to land was not viewed as a problem (even though the group titles issued by the project are not recognized by current land laws)” (The World Bank Independent Evaluation Group, 2013, p. 26). In this sense, there is a clear discrepancy between the perceptions of beneficiaries in terms of their land security, and the reality of the law. Without this new type of ownership being included within law, it is doubtful that the beneficiaries would be protected should an incident occur. Further, such unofficial changes may take time to be incorporated into the legal system (if at all). As recently as April, 2015 the 2002 New Land Policy was still reportedly delayed for further consultation, and in its absence the 1965 law remains in force (Wiggins, Henley, & Keats, 2015). One can imagine that in that context, any post-2002 amendments such as the establishment of the CBRLDP ‘communal ownership,’ will not be legislated for years to come. The same 2015 report claimed that due to the lack of legal framework, land acquisitions have the potential to ignore land users, which could also put resettlement beneficiaries at risk (ibid.).

2.5.2.3.3. Thoughts on the Long-Term Consequences of Titling

In 1999, Deininger and Binswanger wrote that individuals living on communal land “have very secure and normally inheritable rights to land even after a period of absence, but they do not have permanent property rights to a specific plot, a limitation that may reduce investment incentives” (Deininger & Binswanger, 1999, p. 257). Although the CBRLDP was supposed to provide formal land titles to participants, less than three percent of respondents claimed that they had used their deed for a loan. This was likely at least partially because the deeds were not officially recognized, nor were they distributed on a household level, thus posing challenges for those households interested in leveraging the title for capital. As such, the CBRLDP did not appear to fulfill the World Bank goals of poverty reduction through leveraging properties. More follow-up studies will be needed to assess the long-term effects of this new category of ownership on participant well-being.

Finally, previous studies of state-led agrarian reform noted that reforms generally prohibited the sale or rent of land by beneficiaries (Banerjee, 1999) and in fact trusts were not permitted to ‘dispose of’ their land in the five years after it was allocated to them (The World Bank Independent Evaluation Group, 2013, p. 8). Further, there seemed to be no guidelines or policies for the replacement of ex-beneficiaries or how to distribute the land they left behind (Mkamanga & Chimutu, 2008), nor any official policy on re-sale either. One of the only existing policies on the matter is from the 2013 independent evaluation, which states that individuals were permitted to obtain the individual title provided they covered the costs themselves, but it did not discuss abandoned land (The World Bank Independent Evaluation Group, 2013, p. 8). Whether participants of the CBRLDP are able to sell their land, and the exact definition of ‘dispose of’, remains unclear.

2.5.2.4 Summary

The findings in this section demonstrate a lack of informed consent by, and decision-making power of, CBRLDP participants. The majority of beneficiaries claimed that someone else made the decision regarding the location of the resettlement site. Even where their Executive Committee members were taken to preview the land before purchase, it was unclear that more than one option was presented. The lack of informed consent was elucidated particularly during focus group discussions and interviews, where former and current beneficiaries described the different understanding they had of their new home before they moved. Though disappointment was not universal, former beneficiaries in particular described how surprised and disappointed they were by what they found at the resettlement site, especially when their land flooded or the soil quality was poor.

Informed consent was further examined through a study of the perceptions of land ownership. A majority of the participants believe that they had a different type of title than they actually have. Nearly all participants declared they were not given a choice of the type of title awarded, but nonetheless expressed satisfaction on the basis of a wrongly ‘assumed title’ (i.e. individual freehold title). This lack of choice and misconception suggest that the relevant elements of the CBRLDP were not clearly explained to participants. The discrepancy between beneficiary perception and the reality of land titles is problematic, and could influence participants’ decision to stay, particularly as it relates to a false sense of

security. The lack of clarity regarding ownership will affect future generations particularly women, as beneficiaries continue to practice matrilineal inheritance yet there are no official or enforceable laws in place to protect their rights, and the protection they received from social history in their villages of origin no longer exist. Previous studies have criticized the state-led reform mechanisms for not simultaneously carrying out resettlement and land titling processes, and thereby frequently leaving resettled households without a title (Borras, 2002, p. 35; Bryant, 1996). Though land titling was supposedly integrated within the implementation of the project, the logistics of it was vague for beneficiaries and the title itself remained unofficial, or at least untested, from a legal standpoint.

Further, the unit of analysis for assessing consent and power of choice used here was at the individual level. However, the design of the CBRLDP was such that representatives had to make decisions on behalf of community members. Critically, the designation of a representative does not ensure that they have full information either; in many cases, the Executive Committee did not have numerous options of sites to live in, nor were they adequately informed. The nexus between individual and community consent may conflate the ability for individuals to truly engage in the process.

Overall, a lack of informed consent and power of choice is highlighted by the low level of understanding regarding ownership among participants, the lack of awareness of the actual conditions of the resettlement site, the very limited influence of individual households, and committee members in the decision-making processes. Therefore, the use of the term ‘voluntary’ for this resettlement seems, to some degree, unwarranted and should continue to be scrutinized as the experience of CBRLDP participants does not conform to the definition presented by the World Bank.

2.5.3 Factors Influencing Decisions to Leave the Resettlement Site

Many elements, both internally and externally, factor into beneficiary perception of their place and permanence in their new home, and influence their decision to stay or return home. Factors influencing a participant to leave a resettlement site can be subtle, including social relationships and a sense of community, or more concrete such as access to markets and infrastructure. These various conditions and experiences at the resettlement site factor in to a participants decision to stay or leave and thus potentially lead some to withdraw. Below

attrition rates are presented, as well as an examination of the various motivating factors that current and former beneficiaries identified as reasons to leave or stay.

2.5.3.1 Attrition

Earlier sections of this chapter pointed to the lack of informed consent that resettlement participants faced, as well as various factors that influenced their motivation to participate, both of which play roles in their later decisions to stay or leave the resettlement site. Decisions to leave the resettlement area are complex; departures often occur after the ‘completion’ of the project and can take place informally and without being noticed by local authorities and (often-departed) project staff. As such, attrition is an understudied element of voluntary resettlement. This research fills that gap, and below we examine factors of attrition and experiences of departure within beneficiary communities.

To date, only one study has examined the issue of attrition for the CBRLDP project in some detail. Mkamanga and Chimutu (2008) conducted their study in January and February 2008, when roughly 8500 households, or half of the final total, had been resettled. They found that 142 out of 1447 households surveyed (or 10 percent) had withdrawn voluntarily, and 55 had been expelled (due to misbehaviour, misappropriation of funds, conflict with other beneficiaries and witchcraft).¹⁰ Mkamanga and Chimutu (2008) argue that the majority of withdrawals were linked to resource flows, where 24 percent were after the first harvest, 25 percent occurred after the 3rd (and final) tranche of development funds were received, and 9 percent and 5 percent were after the 1st and 2nd tranche of funds; 9 percent was not certain. The remaining withdrawals, accounting for 28 percent, occurred before relocation, and were reportedly driven by financial considerations (32 percent), lack of social services (13 percent) and unfertile lands in relocation sites (8 percent), and family problems (8 percent) as the most commonly cited factors. This research attempts to update the 2008 figures with a more current, and post-intervention estimate, with the rationale that attrition rates can shed light on the sustainability of the project.

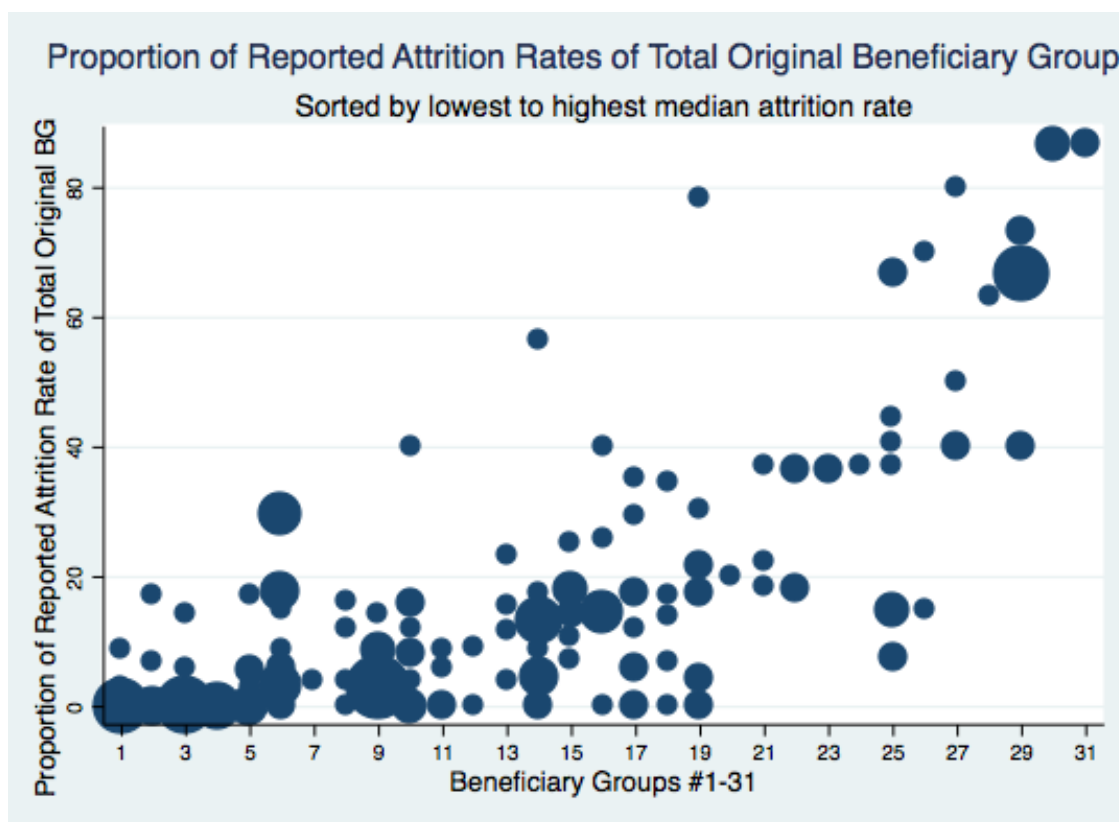
¹⁰ Chinsinga also alluded to the diverse forms of attrition that were occurring within the CBRLDP as he found that some beneficiaries maintained plots in their district of origin and resettlement site, and others left as soon as the project grant ran out (Chinsinga, 2011, p. 388).

2.5.3.1.1 Attrition Results

Each of the 203 households in this study, representing 31 beneficiary groups in total, was asked how many households of their original *trust*, “have now left the resettlement area?” Reported attrition rate responses ranged from zero percent to 86.7 percent, calculated as a proportion of the total number of households who originally moved with the trust.¹¹ 106 beneficiaries, or 52 percent, reported attrition rates lower than 10 percent of the attrition rate stated in (Mkamanga & Chimutu, 2008). The remaining 48 percent of respondents reported values greater than the 2008 findings. However, agreement of withdrawal rates varied across beneficiary groups from full agreement to stark disagreement. For example, in a trust with 27 households in the original beneficiary group, of the 6 respondents interviewed, all 6 agreed that no one had left the trust. Similar agreement was found in a trust with 35 original households, where everyone among the 8 respondents thought that 13, or 37.1 percent of beneficiaries left. On the other hand, in a different trust of 27 original households, responses varied from 2 to 18 withdrawals (7.4 percent to 66.7 percent). Across all of the trusts interviewed for this study, the median reported proportional attrition rate was 8.96 percent, and the average value was 16.7 percent. Below shows the proportion of the reported attrition rates of the original group size as reported by the land offices in each district. They are sorted by median value for each group, and each point is weighted to indicate the number of responses. The median, rather than mean value, was used given the variety of responses for each value.

¹¹ 92 percent of beneficiaries who stated that at least one member of their group had left believed those individuals went back to their village of origin. 3 percent did not know where they went.

Figure 2.4 - Proportion of Reported Attrition Rates of Total Original Beneficiary Group by Median



The findings illustrate the variety of answers provided by the respondents mentioned above. This is potentially due to the fluid nature of the word “left” and the differences in interpretation. Some beneficiaries permanently left their resettlement site and planned never to return. Others worked their resettled land as seasonal farmers, coming in only during the rainy season and harvest times, and working elsewhere during the rest of the year. To add to the complexity, some returned to their district of origin for an extended period of time, but still planned to return to the resettlement location. Another reason to suggest the variation in responses is pointed out in de Haan and Zoomers (de Haan & Zoomers, 2005) and Scoones (2009), where households are not homogenous groups, and as such livelihoods can vary within a household. For example, some of the members of the household may remain to farm, while others can leave to search for work elsewhere; this is an acknowledged risk management strategy as it provides access to additional sources of income and land (Taylor & Martin, 2001).

Some of the variations hypothesized above are confirmed within focus group discussions with former beneficiaries, all of who had returned to their village of origin. Below are excerpts from the focus groups and how they represent the diversity in reasons for leaving in terms of various types of attrition.

Respondent 2: [Chichewa] “My heart is still there [in the resettlement site]. I came here [a few years ago] because there was a funeral and I do not have transport to go back. And I heard that after two years if you did not go back your land will be re-distributed.” (Focus group #1, former beneficiaries, 28 July 2014).

This quote reflects the lack of choice for some individuals: this respondent left the resettlement site temporarily but is unable to afford the transportation to return. However, not everyone shared this view of attrition as a temporary state. The respondent below described a case of seasonal migration.

[Chichewa] “If we ask those who stayed, they will say they are just waiting to receive the ownership letter then they will sell the land and come back. What those people do is just stay for the season. When it is the rainy season, they come here [to the village of origin] to cultivate, and then they also cultivate where they are living [in the resettlement site]. ...They have a life of movement.” (Respondent 1, Focus group #4, former beneficiaries, 31 July 2014).

The final perspective is also from a focus group discussion (#4) with former beneficiaries. In this dialogue, they are discussing their reasons for leaving, and the differences in the quality of land between their district of origin, Thyolo, and their resettlement district of Mangochi. They represent the perspective of individuals who permanently left the resettlement site.

[Chichewa]

Respondent 1: I really wanted to stay there...had it been that they had given me good land, I would have been there until now. If I went back there, it would mean that I have chosen to have the problems which I ran away from [when I came back to my village of origin]. My children were not learning school there, but now they are [in the village of origin].

Respondent 2: And the huts were the homes of snakes because the land there is wet...

Facilitator: [In response to an earlier statement] And the people who stayed are just waiting to receive the ownership letter to sell the land?

Respondent 1: Yes when we went for the training at Mangochi we were told a person should stay for 5 years then you shall receive ownership... They cultivate both here and where they are living...

Respondent 4: The land is better here.

Respondent 5: Another problem is that there, they have to sell the food they harvest for money.

Facilitator: So you don't sell what you harvest here?

Respondent 1: No, if we harvest here, we keep that food. We sell some food from irrigation farming, but we also go look for piecework at the tea companies. In families we help each other. If one has gone to do piece work, one goes to hoe the maize garden therefore food is always available. In Mangochi, we were selling maize in order to have salt or relish, and yet you only harvest 4 bags of maize. For how many days will those bags last?

Facilitator: Did the government do what it promised then?

Respondent 7: The land was not good. Those people who stayed try to harvest because they were given good land.

Respondent 8: The government did what they promised but we were the ones who failed to stay. We failed to stay because the type of soil.

(Focus group #4, former beneficiaries, 31 July 2014).

This quote embodies the interconnected nature of attrition rates, with motivations to join and the misunderstanding of the project site, or the lack of informed consent. It is clear that despite variation in the permanence of beneficiary attrition, those who decided to leave had compelling reasons particularly regarding the quality of life. This illustrates that even in cases where there is real incentive to stay in the resettlement site, there is still a *desire* to move back, and that motivations may have been driven by financial pull factors as well as land scarce push factors.

Despite the mixed attrition results, it was important to also establish if beneficiaries were satisfied enough to stay in the resettlement site. 91 percent of survey respondents living in their resettlement site at the time of the questionnaire responded “no” to the question, “Have you ever considered leaving the resettlement site?” Further, 88 percent of respondents believed that their children would have a better future in the resettlement site. This would suggest that a high number of beneficiaries were satisfied with the move and their livelihoods had improved. These results reflect the opinions of individuals from sites with high attrition rates, and from low ones, thus representing experiences from diverse resettlement sites, but do *not* include the opinions of those who left.

2.5.3.2 Motivations to Leave

Though attrition rates can reflect the sustainability of a project, the understanding of factors motivating decisions to leave, or recognizing that there is not always a choice, is essential. The section below focuses specifically on ‘push’ factors stemming from the resettlement site itself that motivate beneficiaries to leave. Section 2.5.3.3 addresses the situation in the district of origin, as that can offer ‘pull’ factors.

Turner and Hulme (1990) argue that land settlement schemes are one of the most complex development initiatives to undertake, as they require not only the creation of roads, infrastructure and agricultural systems, but also social relationships and a modification of existing cultures and norms. Certainly, these factors have been brought up in previous studies of the CBRLDP, often as limitations: a lack of access to infrastructure, including markets as well as schools and hospitals, was one of the most obvious and detrimental lapses in the project (Kishindo, 2009; Mendola & Simtowe, 2015; Mueller et al., 2014).

Though the majority of survey respondents had not considered leaving, the relatively high reported attrition rates in some areas suggest that it is important to examine this in depth. Therefore, we asked survey respondents who had considered leaving why, and why they chose to stay. Only 15 individuals responded to why they considered leaving and the answers included: conflict over land with beneficiaries, general conflict with beneficiaries, no relatives, no political freedom, religious conflict with non-beneficiaries, land conflict with non-beneficiaries, sick child, unable to sell crops, and a lack of infrastructure. Various conflicts and lack of infrastructure were the two most common responses, though the number of respondents was small; however, they reiterate the findings of other studies mentioned above. Again the sample size was small, but participants said the reasons they stayed included: the traditional authority (TA) or the beneficiaries themselves solved the conflict, no money for transport, not enough land at home, hoping they will receive infrastructure from the government, staying for children, and the ability to grow enough crops to feed their family. Not enough land at home and the ability to grow crops are interconnected, and were previously mentioned in the attrition analysis, and waiting for infrastructure that may never come is a reminder of the lack of informed consent.

The survey results suggest that the majority of participants are satisfied, however these results only tell one side of the story. In select interviews conducted with beneficiaries who self-identified to be interviewed, they brought up stories of conflict and a lack of livelihood diversity. One area of discontent, mentioned above, was the lack of access to infrastructure, this affected various aspects of their lives ranging from their health to their income. In terms of income earning, one beneficiary explained that: *“I made more money in Thyolo, because here no one is buying crops, so we have to throw extra food away. A few vendors come but we are selling our crops at a lower price”* (Beneficiary, personal communication, 30 June 2014).

Another motivating factor for withdrawal, particularly for individuals from Mulanje or Thyolo was the lack of income generating activities available for them in the resettlement sites compared to their districts of origin. One former beneficiary had this to say about topic: [Chichewa] *“In Mulanje there are alternative sources of income, in Mangochi you could do piecework, but you’d be paid in food”* (Focus group #1, former beneficiaries, 28 July 2014).

Beneficiaries also reported that some individuals only joined the project for the financial incentive and that a few of their former group members left when the projects’ cash installments ran out. One beneficiary, the majority of whose group had returned home, had this to say: [Chichewa] *“In the first days, people were promised that they would receive cash when they got here. When the money stopped, they left and went home”* (Beneficiary, personal communication, 1 August 2014). The financial incentive is controversial, as it does provide individuals with a much needed leg up in order to set up farms or businesses, but it can also facilitate corruption and attract participants who are more interested in the money than the land and deed. It is clear that a grant of US\$1,050, which is over four times as much as the 2014 Gross National Income (GNI) per capita in Malawi (US\$250) (World Bank, 2015), would be incredibly appealing for many rural Malawians. Given the other instances of misunderstanding, it is likely that the allocation of the funds was not clearly explained, or that the distribution of funds was delayed as it had been for title deeds. The inclusion of a financial incentive, particularly one that is so high in comparison to the GNI per capita, must be critically assessed, as it may have led to corruption, or individuals registering just to

receive the grant. For individuals who registered just to receive the grant, it is clear to see why they would leave after the distribution of funds ended.

The CBRDLP was designed to give participants more land security through official land registration, but by removing individuals from their communities, and moving them to new areas where they did not share a religion or ethnicity with their new neighbours, many faced prejudice. Customary land law, though insecure in formal Western practice, can offer individuals security through social institutions and cultural norms (Musembi, 2007). But individuals rely on their social networks for more than just land security; social capital plays several critical roles particularly in resettlement (Barr, 2004), and such examples of conflict exemplify a beneficiary's experience in a new community. Discrimination did not just have negative impacts on economic and agricultural productivity; it also had ramifications on social interactions. Below, two former beneficiaries elucidate their relationship to their non-beneficiary neighbours.

[Chichewa]

Participant #7: When we arrived in the resettlement area we were discriminated against: they were calling us that we are kadzigulire¹², so if someone was chatting with us he or she could be afraid that he will be called kadzigulire as well and then people stopped chatting with us.

Participant #1: They also said that if they chat with us we are going to pass HIV to them.

Facilitator: Anything else?

Participant #8: some of us were discriminated when we want to fetch water at the borehole by saying that we eat duck, monkeys, pigs, and also we eat mice therefore these people eat bad things then they should not fetch water to where we fetch water.

Participant #5: on the same issue about discrimination when we went to the hospital we were told we were not allowed to sit together with them on the bench, so if we arrived at the hospital we should sit on the floor until they finish helping [the non-beneficiaries] and after that then they would come and help us. Another thing, at school, they would not allow our children to enter classroom together with theirs, they would only let our children enter after theirs. So when we ask them why they are doing that they said your children cannot enter into the classroom together with us since you are new comers and you should come in the afternoon.

(Focus group #1, former beneficiaries, 28 July 2014).

¹² The respondent is referring the name non-beneficiaries used to call beneficiaries; it stems from the Chichewa name for the CBLRDP, Kudzigulira Malo.

One resettlement site in particular reported numerous cases of conflict relating to discrimination, but none of the beneficiaries had left to return home. Interestingly, the majority of respondents from that trust came from Thyolo district, and thus, despite the conflict, may not have been able to return home due to a lack of available land in their village of origin. The first issue raised was between the chief of the resettlement site and the beneficiaries: the chief had been the head of the area before the CBRLDP started, and inherited new citizens as participants were resettled. The beneficiaries began making and selling charcoal as they had done in their district of origin until the chief stopped them. The story is explained in the excerpt below:

“The beneficiary explained to me that when they tried to sell the charcoal, the chief forbade them and organized people to take the charcoal from the newcomers. They were physically fighting with the non-beneficiaries, and people had to carry machetes in self-defense. But he told me that selling firewood was the only way to make money here, no one buys maize, but after the conflict ‘only the brave ones continued to sell’ the informant explained” (Fieldnotes, Kelly Sharp, 30 June 2014, Southern Malawi).

The conflicts between that group and the chief did not end there. The respondent also informed me that they were discriminated against by the chief when it came time to distributing fertilizer for the farm input subsidy programme (FISP). He stated that due to the discrimination, he had to wait until non-beneficiaries received FISP coupons, and then he sold them to beneficiaries (Beneficiary, personal communication, 30 June 2014). A similar discrimination came up with former beneficiaries in focus group discussions as well. One respondent explained in Chichewa:

“On the point of the [fertilizer] coupons, we were discriminated against. Out of 34 people [in the trust] only 2 people were given the coupons. It was difficult for us to buy fertilizer; we could not benefit anything” (Focus group #3, former beneficiaries, 30 July 2014).

This sentiment is supported in other literature. For example, Chinsinga highlighted the disconnect between official policy and public opinion of the project, where many local communities believe that they should inherit the idle estates rather than give the land to outsiders, as well as the unwillingness of some traditional leaders to assist beneficiaries - who are viewed as “government’s people” and would rather conserve the government services, such as FISP, for their original community members (Chinsinga, 2011, pp. 389-390). Mendola and Simtowe (2015) also found that the number of government coupons

received by beneficiaries decreased over the course of their survey. This echoes the conflict expressed by many of the beneficiaries who resettled into a community of a new ethnic group or religion. Again, these stories are from individuals who chose to leave the programme, and obviously do not reflect those of every participant. Indeed, many of the participants spoke highly of the project and were happy to have moved. Although relatively few participants left the project, the story of conflict and discrimination is important as future projects should attempt to facilitate integration mechanisms.

2.5.3.2.1 Summary

Though the majority of beneficiaries remained on some of the resettlement sites, attrition rates were high on others, reflecting the relative hardships that participants faced in resettlement areas. Common reasons former beneficiaries gave for leaving their resettlement site included: conflict, lack of infrastructure (particularly schools and hospitals), and lack of alternative forms of livelihoods. Earlier findings regarding lack of consent, particularly related to a lack of understanding of the soil quality and conditions of the site, may also have motivated individuals to register without knowing the full extent of outcomes, and could have led to withdrawal upon seeing the reality of the site. Further, a high financial incentive may have encouraged some individuals to register and then leave once the grants ran out. Though the CBRLDP had only two objectives (increase agricultural productivity and incomes), rural livelihoods are complex, and external factors such as relationships and access to social networks can also weigh heavily in decisions to leave a resettlement site.

2.5.3.3 Externalities Driving Attrition

The previous section explores the different push factors for withdrawal, but this section examines the external pull factors that drew beneficiaries back to their district of origin. The results can be used in future resettlement projects as a predictor of who would be more likely to leave. In an interview, one of the beneficiaries who had successfully and happily resettled used an expression in Chichewa to describe his situation: “Kulemera ndi Kudya” which means ‘wealth is having food to eat’ (Beneficiary secretary, personal communication, 27 June 2014). This expression is a succinct generalization of motivators regarding decisions to either stay or leave a resettlement: without an alternative, people will stay in an undesirable location as long as they can at least eat. However, if conditions are so poor, those who have

an alternative will use it. For the purposes of this study we were particularly interested in the role that the district of origin played as a pull factor, given that the project was designed around the scarcity of land in specific regions of Malawi. We hypothesized that households from Mulanje would be most likely to withdraw, given the opportunities and infrastructure their district offered. We also argued that the individuals from Thyolo, though they have similar infrastructure and livelihood opportunities as Mulanje (in the form of working on tea plantation) would be less likely to return home than those from Mulanje, given higher population densities and thus less land to move to.

Table 2.5 below summarizes the median percentage of reported attrition rates categorized by respondents district of origin. To divide these further, Table 2.6 organizes households based on median reported attrition rates categorized by where beneficiaries within our study moved from and to. A non-parametric Leven's test was used to verify the similar distributions of the groups ($p > 0.05$). From this, we performed a Kruskal-Wallis test to determine the likelihood that the populations would have the same distribution of attrition rates. The Kruskal-Wallis test found $p = 0.0001$ and thus the differences between reported attrition rate values between district of origin is not due to random chance. By dividing the Chi^2 value by $(n-1)$, we found that 11.44 percent of the variability in rank scores is accounted for by the district of origin. A Mann-Whitney test was conducted for each of the districts of origin and indicated that the proportion of the reported attrition rates was greater for individual from Machinga, Mangochi and Mulanje individually than when the remaining three districts are combined ($p = .02$; $p = .03$; $p = .00$). The probability that the value of the proportion of the reported attrition rate by each district of origin is greater than the other three [$P(x) > (w,y,z)$] is highest for individuals from Mulanje ($P = 0.71$), and lowest from Mangochi ($P = 0.37$), indicating that it is more likely that individuals from Mulanje will leave their resettlement site, and individuals from Mangochi are more likely to stay.

Table 2.5 - Summary of Attrition Rate Statistics by District of Origin

District of Origin	Median of % Proportion of Reported Attrition Rates	Mann Whitney U Test p-value	Probability that % reported attrition rate from group $x > (w,y,z)$
Machinga	7.14	p=0.02*	P=0.40
Mangochi	0.00	p=0.03*	P=0.37
Mulanje	18.35	p=0.00*	P=0.71
Thyolo	11.54	p=0.66	P=0.48

Table 2.6 - Summary of Proportion of Attrition Rates by Beneficiary Movement from District to District

Movement (from District to District)	Median of % proportion of reported attrition rates
Machinga to Machinga	7.14
Mangochi to Mangochi	0.00
Mulanje to Machinga	8.00
Mulanje to Mangochi	37.14
Thyolo to Machinga	17.39
Thyolo to Mangochi	11.54

The statistics demonstrate that the district of origin can play a significant role in determining the likelihood of beneficiary withdrawal. Households that moved to a new district in even the remotest areas, with the least infrastructure and community in terms of numbers, were more likely to stay if they were from a more densely populated district (and thus had less available land in their home region). Indeed, anecdotes from other aspects of this research would support this finding; for example, the beneficiary group from Thyolo had numerous reports of conflicts in the resettlement area, yet no one left (see section 2.5.3.2). This might not be for a lack of desire to leave but rather a lack of opportunity to return home. To explain further, Table 2.7 below lists the population densities of each district in 2008 in Malawi. Table 2.8 on the right, lists the population densities of neighbouring South and East African countries, some of which also engaged in land reform initiatives.

Table 2.7 - Population Density per Square Kilometer by Select Malawian Districts in 2008

District	Densities in 2008 per sq. km
Mangochi	128
Machinga	130
Mulanje	256
Thyolo	343

[Source: (National Statistical Office, Government of Malawi, 2008)]

Table 2.8 – Select Country Averages for 2008 Population Density per Square Kilometer

Country	Densities in 2008 per sq. km
Malawi	150
Namibia	3
Zimbabwe	33
South Africa	41
Tanzania	48
Rwanda	414

[Source: (The World Bank, 2015d)]

In comparing the population densities within Malawi, Thyolo has a density over double that of Machinga and Mangochi, as well as the national average. Malawi's national density is itself much greater than neighbouring countries, with the exception of Rwanda. Thyolo's density is approaching that of Rwanda; this provides some context, for why CBRLDP participants originally from Thyolo would not have the flexibility to return home that participants from Mulanje would have, given the existing constraints on land. The majority of resettled beneficiaries from Machinga and Mangochi that were included within this study were settled internally, and were often already living on or beside their new land. Therefore it is logical that they would not have high attrition rates because their communities were nearby and they were accustomed to the infrastructure and conditions of the region. Mendola and Simtowe (2015) found that beneficiary land size increased during the four survey rounds, which coincides with our attrition results: as more families left there was more space for others to farm. The authors of the study did not offer a suggestion why this occurred, nor do they disaggregate their data by resettlement location, so it is unclear what the characteristics were for beneficiary increase in land size.

The project moved 15,000 households, many of whom remained in their resettlement site, so

the question must be raised: did the resettlement of thousands of households out of Mulanje and Thyolo in particular, relieve the land pressures in these districts? In an interview, the Thyolo Lands Officer stated that only 2306 households were moved out from that district (Thyolo Lands Officer, personal communication, 1 August 2014); this is only 0.39 percent of the total number of households living in the area (National Statistical Office, Government of Malawi, 2008). He argued that despite the project, population densities within Thyolo increased from 267 per km² in 2004 to 342 per km² in 2008, so although the project provided relief to individual households or communities, the district still faces an overwhelming pressure on the land (Thyolo Lands Officer, personal communication, 1 August 2014). Indeed, a mid-point project evaluation claimed that the project had already reduced tensions over land, (The World Bank, 2009), but it is unclear how that could be possible given the increase in population density that occurred during that period. Finally, the Lands Officer pointed out that soil quality could not be held constant: *“In terms of the long term, we are just transferring the problem from one place to another. The issue of soil fertility is key, and there will reach a time when the whole country is saturated. But for the short term, we have addressed the problem [for beneficiary households]”* (Thyolo Lands Officer, Personal Communication, 1 August 2014).

2.5.3.4. Summary

The nuanced attrition rates presented here reflect the diversity of the conditions on resettlement sites, and indicate that despite providing participants with a cash incentive, larger plots, and at least the hope of official land ownership, there were many factors that motivated some beneficiaries to leave. The project offered beneficiaries the opportunity to increase their agricultural productivity (due to larger land holdings), the title deed to land, and a financial incentive. Indeed, the lack of land in the district of origin was the most commonly cited motivator to participate in the project. This, along with the other previously mentioned incentives, served as factors to encourage beneficiaries to remain in the resettlement site. A notable issue that motivated beneficiaries to leave the resettlement site included conflict, both with other beneficiaries and with previously established communities living near the resettlement site, which suggest a lack of social network for participants. Other factors surrounded poor living conditions that were not expected by participants, included a lack of infrastructure, poor soil quality, flooding, and a lack of income earning

opportunities and these reflect the larger issue a lack of informed consent.

The attrition rates described in this case offer a unique perspective into the beneficiary perceptions of the project, and can ultimately shed light on the sustainability of the project. Individuals who remained in their resettlement site represent those who either had no choice to return home, or who saw that the land offered a better future. Those who returned suggest that they were able to leave, and saw a reason to do so, indicating that there were greater opportunities elsewhere. This is keeping in mind that given the complex nature of the term ‘left’, it is unclear whether the individuals who were reported to have ‘left’ the beneficiary site had done so temporarily or permanently.

The findings regarding the importance of the village of origin in determining the likelihood of a beneficiary to withdraw have important policy implications in the selection of beneficiaries. Given our results, the participants who are more likely to stay, either moved internally within their district of origin, or came from the most densely populated regions that did not provide them with an opportunity to return home. In that sense, the latter category of participants is indirectly forced to stay in their resettlement site. Finally, despite efforts to reduce population pressure, densities actually increased in Mulanje and Thyolo during the time of project implementation, and thus land constraints would have increased as well, providing no relief for future generations of small-scale farmers.

2.6 Conclusion

Land reforms involving population resettlement have come under criticism in the past, notably for a lack of informed consent and participation by resettled communities in decision-making processes. Recent projects, such as the one studied here, have sought to address this problem through the use of ‘community-based development’ and ‘voluntary’ approaches, where communities themselves (and individual households) have more control in land acquisition decisions and have provided their informed consent to being resettled. This study suggests that despite supposedly moving ‘voluntarily’, participants did not feel included regarding the decision of the location of resettlement land. While this lack of participation did not affect plot satisfaction for the majority of beneficiaries who remained, it did contribute to reasons to withdraw among former beneficiaries, as the conditions they found at their new homes did not match their expectations. Moreover, despite project

intentions to offer beneficiaries a choice regarding the type of ownership, the majority of participants did not feel they were consulted about it. This lack of consultation may explain some of the confusion regarding the characteristics of their land ownership. We found that though beneficiaries felt secure in their land holding, their security depended on an official title deed that they may not have needed in their former customary system. Moreover, reports indicate that the group title deeds are not recognized under current Malawian land laws: this poses a potential problem for beneficiaries in the future, in the event of a dispute over ownership, particularly as their leasehold agreements expire (this may have already occurred in some cases). It is also misleading for participants who choose to stay in their resettlement sites hoping that they can one day sell their land. The duality between individual and community level consent, particularly as the project required the use of representatives to take group decisions, could have contributed perceptions of lack of engagement. Therefore, caution must be used in designing resettlement policy, particularly where there is a transfer of decision-making power, and participants must volunteer at the individual *and* community scale.

An understudied measure of land reform project success is the level of attrition. Individuals can choose to withdraw after they find that their understanding of the programme does not meet with the reality. For example, participants who believed they would receive funds or a title deed, or when the quality of the land is poorer than what they previously had. This study found that the attrition rates varied greatly amongst beneficiary groups, but that one predictive factor was the district of origin, as the availability of land at home seemed to account for much of the beneficiary decision to leave. Though many factors play into such a decision, including access to infrastructure, alternate livelihoods, social capital, and perception of security, we argue that choosing to return ‘home’ is constrained by the availability of land in their area of origin. This is an important policy distinction, as participants who find that their new land is unsuitable should be able to seek other options, including a return to their previous home area. In order to avoid getting ‘trapped’ in unsuitable resettlement areas, beneficiaries need to be made aware of the conditions in the new location and be in a position to make an informed and lasting decision – especially if they come from regions with very high population density and thus have little changes of being able to come back.

In sum, the findings of this chapter indicate that the resettlement process was not ‘voluntary’ in the sense of power of choice and informed consent. Participants were not made aware of resettlement site conditions, and this had mixed results on determining the satisfaction of the site overall. Beneficiaries not only had a misunderstanding of the type of land ownership, but their official tenure is not legally recognized. Finally, various factors led to participants’ decisions to stay or leave, but the vast majority stayed for the large land holdings gained as result of resettlement, and former-beneficiaries commonly left due to poor crop productivity and lack of access to infrastructure. The areas in which attrition rates were high, particularly those areas where conditions were considered worse than the district of origin, highlight the need for *improved* living standards in resettlement sites, as well as the need to adequately inform participants of these conditions so they can make the best choice for their situation. Future research should focus on the long-term effects of this unique tenure situation, as well as comprehensive attrition analyses.

3. More Land to Farm, More Food to Eat? Nutrition and Food Security in Voluntary Resettlement Schemes

3.1 Introduction

In 2015, the Food and Agriculture Organization declared that there were 793 million undernourished, or hungry, individuals in the world; nearly 30 percent of whom live in sub-Saharan Africa (FAO, 2015.; *Global Health Observatory Repository*, 2015). Despite global declines in undernourishment, from 18.7 percent to 11.3 percent in the last decade, sub-Saharan Africa still suffers from the highest prevalence in the world and rates have declined only modestly (FAO, 2012; FAO, IFAD, WFP, 2014). Though undernourishment, or the lack of sufficient caloric intake, is critically detrimental to the health of adults, malnutrition (the lack of adequate micro and macro nutrient intake) has devastating lifelong and irreversible effects particularly on children. Child malnutrition (including fetal growth restriction, stunting, micronutrient deficiencies, among others) are the underlying cause of approximately 3.1 million deaths annually (Bhutta, 2013; World Food Summit, 1996). Globally 165 million children are stunted, and 52 million suffer from wasting (International Federation of Red Cross, 2006; UNICEF, 2013), with again child malnutrition rates being higher in Sub-Saharan Africa than global averages. In 2013, the stunting rate (HAZ) for children under 5 was 39.4 percent in Africa, compared to 24.5 percent globally, and it was thus the highest regional prevalence in the world (*Global Health Observatory Repository*, 2015). Under five underweight (WAZ) prevalence, which represents both stunting and wasting, was 24.9 percent that same year for Africa, only 1.5 percent less than the prevalence found in South-East Asia and 14.9 percent higher than the 15.0 percent global average (*Global Health Observatory Repository*, 2015). Finally, in 2010, WHZ (wasting) rates were 8.5 percent in Africa compared to 8.0 percent globally, in part reflecting the prevalence of famines that year (Black et al., 2013; *Global Health Observatory Data Repository*, 2015).

The immediate cause of mal-and-undernutrition is a lack of access to safe, adequate and nutritious (including diverse) foods, also known as food insecurity (FAO, 2012). Food insecurity is common amongst rural households in the developing world, and particularly in sub-Saharan Africa, as these families depend on their land to produce crops, which they both

consume and grow; however, where land is scarce, they are unable to produce enough to meet their consumption needs. Voluntary resettlement is one potential solution to address food insecurity, as households are provided access to larger plots with the objective of producing more food. This study examines the food security effects of voluntary resettlement participants in Malawi, and how resettlement affects dietary diversity. Though it focuses on household and individual adult scores of dietary diversity, these values reflect adult (including maternal nutrition in some cases), but also indicate what is available within the home for children as well. This study is among the few that focus directly on the impacts of resettlement on dietary diversity, which is so critical to human health and development, and thus to ending the poverty cycle.

3.2 Literature Review

3.2.1 The Link Between Food Security, Dietary Diversity and Malnutrition

Food security was defined at the 1996 World Food Summit as a situation in which individuals have a consistent and reliable supply of safe, adequate and nutritious food to sustain a life that is both healthy and active (World Food Summit, 1996). This definition rests on four dimensions: food availability, access, stability, and utilization (FAO Food Security Programme, 2008). The dimensions of food insecurity have an impact on nutrition and thus health as food insecurity prevents individuals from consuming adequate quality and quantity of nutrients to sustain a healthy life, and can thus lead to undernourishment or malnutrition. Undernourishment is defined as an inadequate consumption of kilocalories to meet energy requirements, whereas malnutrition pertains directly to the quality of nutrients consumed and processed (WFP, 2015).

Chronic malnutrition, resulting in stunting during the first 1000 days of life, beginning at conception, leads to irreversible physical damages including shorter height, poorer cognitive development, and intergenerational damages such as a lower offspring birth weight (Victora et al., 2008). Effects of chronic malnutrition are most damaging for children under five as they have lifelong and intergenerational consequences (Bhutta, 2013). However, adult malnutrition is also critical as it can reduce their productivity at home and at work, and decrease maternal health which in turn negatively affects fetal development (Bhutta, 2013;

Bryce et al., 2008; Bukania et al., 2014). As such, prevention of malnutrition has lifelong positive impacts children and their offspring, and for adults as well.

A highly varied diet has long been recognized as a key component to a high quality diet, and a lack of diversity is a problem particularly for individuals in developing nations who rely on starch staples with little access to animal products (Ruel, 2003; Swindale & Bilinsky, 2006). Further, findings in Ruel et al (2002) suggested many problems of nutrition are the effect of a poor quality of diet rather than a result of lack of calories. Studies have also shown that maternal dietary diversity reflects the dietary diversity of their child as well, indicating utility in using maternal (individual) dietary diversity score assessments (USAID Infant & Young Child Nutrition Project, 2012), and though maternal diet is not assessed directly here, adult diversity and health still plays a significant role in the economic functioning of a household. This study thus examines dietary diversity, and how it is affected by voluntary resettlement, by using the dietary diversity score (see Methods). In using both household scores and individual scores, the status of adult nutrition is assessed, which is important for the productivity and health of the primary income earners within a household, but also reflects what food is available for children to consume.

3.2.2 Food Security and Dietary Diversity within Land Reform

3.2.2 i) Food Security in Land Reform

Food insecurity, resulting from a lack of land, is often one incentive for a government or people to undertake resettlement. However, it is not necessarily explicitly stated within the goals of the project in favour of other context specific objectives, such as poverty reduction or reducing constraints on land. For comparative purposes, two cases from Southern Africa are discussed below to illustrate the complex relationship that can exist between land reform and food security.

Propensity scores matching amongst South Africa's land grant recipients and non-participants found that beneficiaries are significantly more food insecure than non-participants (43 percent compared to 35 percent respectively were food insecure in 2004) (Valente, 2009). This could have been due to a lack of available income (related to the cost of moving or misjudgment of expenses), as well as to a loss of additional income generating activities (Valente, 2009). Zimbabwe's food crisis during the 2000s has been well

documented, and rural farmers suffered seasons of food insecurity and vulnerability (Murisa, 2013) but the causes are contested. Richardson (2007) attributed the crises to land reform and the lack of security farmers faced following resettlement; however, this is critiqued by Andersson, who claimed that the role of land tenure in food security is over-emphasized (Andersson, 2007). Andersson's argument is reiterated by Scoones et al. who debunk the myth that agricultural productivity universally decreased and food insecurity was widespread following the Fast-Track Land Reform Programme by providing evidence for improved food security and an increased rural labour supply (Scoones et al., 2010; 2011). Moyo also argued that, despite periods of food insecurity, the land reform was part of a greater agrarian change as labour relations changed and more small and middle scale farmers became producers (Moyo, 2011; Moyo & Chambati, 2013), and this fundamental agrarian change sets these land reforms aside from other land reform initiatives within Southern Africa.

3.2.2 ii) Dietary Diversity in Land Reform

To date, very few studies on land reform schemes have focused on the dietary diversity within consumption patterns of beneficiary households. Most studies have instead focused on more general economic-based food or agricultural indicators, as in the case of the CBRDP, for which agricultural productivity was evaluated (Mendola & Simtowe, 2015; Mueller et al., 2014). Voluntary resettlement within land reform can address the first two pillars of availability and access by providing more land, which can be utilized to produce crops for household consumption or cash crops for household expenditure, including food.

Though the nutritional status amongst resettled populations specifically is often not studied within land reform, it has been examined in one select case in Zimbabwe. Kinsey (1999) found that comparing Zimbabwe's resettled populations and individuals from their districts of origin in 1997, that resettled children ages 3-38 months had a higher rate of severe chronic malnutrition than the individuals who remained in the site of origin (HAZ z-score figures were 11.6 percent in the resettlement site and 9.0 percent in district of origin), but were slightly less acutely malnourished. He also found that severe chronic malnourishment was much higher amongst resettled populations than the national averages compiled by DHS three years earlier in 1994 (11.6 percent and 6.7 percent respectively). Though the DHS rates are not entirely comparable to the resettlement sites given that DHS includes urban children

who generally have lower rates of malnutrition, these figures still demonstrate the negative effects that resettlement can have on nutritional status. These findings are reiterated in a study of the effects of Zimbabwe's resettlement programme by Hoogeveen and Kinsey (2001).

3.2.2 iii) Food security Within the CBRLDP

In terms of food security findings related to the CBRLDP in Malawi specifically, Mendola and Simtowe (2015) concluded that though agricultural income levels increased, they spiked during the year that the beneficiaries still received project funds but were modest for the years following. Mid-way studies found that project effects on food security were 'mixed,' including a negative effect on consumption assets (Datar, Del Carpio, & Hoffmann, 2009). Post-closure studies established that food expenditures also increased during the first year and decreased slightly during the following years, though they remained above pre-project levels. Mueller (2013) found an increase in agricultural production amongst beneficiaries and projected long term increases to be between 59 and 82 percent, however *productivity* increases for maize specifically were small (i.e. overall production increased but production per unit of land did not). An independent evaluation of the project found that beneficiaries still produced more maize than control groups (The World Bank Independent Evaluation Group, 2013). Having said that, Chinsinga (2011, p. 387) acknowledged the increases to agricultural production found in previous studies (specifically E. W. Chirwa, 2008), but questioned the sustainability of these increases. Though several studies have suggested that the resettlement did increase production, it did not increase yields (Mueller et al., 2014; Simtowe et al., 2011).

In terms of crops grown, Mueller et al's (2014) 2011 follow-up survey found that beneficiaries diversified crop production - growing cassava, pigeon pea, cowpea, groundnut, sorghum and sweet potato compared to the control population, and they also produced more maize, but less cash crops (tobacco and cotton) than the control group. They hypothesized that diversification to cash crops might be riskier if the locations of markets are far or unknown, and that remoteness may have influenced beneficiary houses to produce more staple crops, such as maize, and other diverse crops for their own consumption. Despite the risk, beneficiaries may have been encouraged, or decided alone, to diversify in order to

satisfy household needs, as they are located farther from markets where they could otherwise purchase alternative foods.

Mueller et al (2014) established that the project had positive improved long term effects on household food security for beneficiaries, however they only examined meals per day and thus a proxy of caloric intake but not the diversity of nutrients. Though previous productivity findings are critical in understanding food security within voluntary resettlement, quality of diet, and thus dietary diversity, has been overlooked. The importance of understanding dietary diversity has previously been well established in this chapter, and thus we fill this gap in understanding dietary diversity within this voluntary resettlement scheme.

3.2.3 UNICEF Framework

Malnutrition is not just caused by a lack of adequate nutritious food, as it can also notably result from frequent illness, itself in part the result of a lack of access to health care, whereby illnesses, such as diarrhea, reduces the ability of individuals to retain nutrients (UNICEF, 2013, p. 1). As a result, the UNICEF put together a conceptual framework in order to understand the various causes of malnutrition and established the UNICEF Conceptual Framework on the Determinants of Child Nutrition in 1990 (Smith & Haddad, 2015; see UNICEF, 1990).

The UNICEF framework outlines the connected and hierarchical relationships between immediate, underlying, and basic determinants of childhood malnutrition (see Appendix A). Immediate causes include the child's diet (including diverse and adequate nutrient intake), and their health status, which affects absorption of nutrients. The underlying causes include household food security, resources and the quality of feeding practices, and access to health services, sanitation, safe drinking water, etc. The underlying determinants affect nutrition through immediate causes such as a lack of access to safe drinking water, which means that a child is more likely to develop an illness that will prevent her from absorbing necessary nutrients. Finally, basic determinants occur on a broader scale, in economic, social, political, cultural spheres, yet they still impact at the household level. Basic determinants include poverty, where low income results in households being unable to pay for medical care, lack of access to capital including human, land, natural resources, as well governmental determinants, such as national level governments being unable to establish health care

facilities. Though the framework was designed for children specifically, it can be applied to adults as well.

This article uses the UNICEF framework as a theoretical guide to demonstrate the linkages between poverty and food insecurity, and how this can be addressed through increased access to land, which can potentially reduce the risk of malnutrition.

3.3 Nutrition and Food Security in the Malawi Context

Maize is the staple crop of Malawi, both in terms of food production and local consumption. In 2015, maize represented 90 percent of cereals produced (Global Information and Early Warning System on Food and AgricultureFAO, 2015), accounted for 50 percent of overall caloric intake (Leete, Damen, & Rossi, 2013), and households spent on average, 40 percent of their food expenditure on maize purchase (FAO et al., 2014). Besides maize, other locally grown crops include: potatoes, cassava, rice, millet, pigeon peas, fruits and vegetables. Despite the presence of these other crops, Malawians often do not receive adequate micro and macronutrients given insufficient consumption and variety in their diet due to the dominance of maize. Specifically, child malnutrition rates have been high for at least the last 20 years with stunting at a rate of at least 45 percent (Bezner Kerr, Berti, & Shumba, 2010; National Statistical Office (NSO)ICF Macro, 2011; National Statistical Office (NSO)Macro International Inc, 1994; National Statistical Office (NSO)ORC Macro, 2005). This has been attributed to nutritional imbalances directly (FAO et al., 2014), as well as extreme poverty, poor feeding practices, and unsafe water (Bezner Kerr et al., 2010; Bhutta, 2013; Satzinger, Bezner Kerr, & Shumba, 2009 370.). Malawi constitutes a critical case to the understanding of causes and potential solutions to malnutrition given high rates of poverty and food insecurity, the number of households that depend on the agricultural sector for their livelihoods, the dominance of maize in consumption and the resulting stunting rates of children under 5 years old. Through potential solutions such as increased land access via resettlement, temporary health damage such as those caused by wasting can be reversed, and long term consequences caused by stunting can be prevented.

To date, the Government of Malawi (GoM) has focused their food security efforts on increasing agricultural productivity through the well-known Farm Input Subsidy Programme (FISP). First launched in 2005, FISP provides rural households with subsidized fertilizer and

maize seeds through a coupon system that is distributed by traditional authorities. It has been criticized for focusing too heavily on increasing production (rather than extension services or access to credit, for example) and there is evidence that it preferentially benefits wealthier households (Graeub et al., 2015). The GoM does have other approaches to address malnutrition specifically, such as the National Nutrition Policy and Strategic Plan, which includes community-based nutrition interventions such as Community Therapeutic Care. However, FISP has clearly been the main focal point of the GoM's food security approach: in 2008/09 the program accounted for 74 percent of the Ministry of Agriculture and Food Security budget, and 16 percent of national budget (Dorward & Chirwa, 2011). The Government has acknowledged the importance of dietary diversity, and added fifteen objectives to the Ministry of Agriculture's Agriculture Development Program in 2008, the majority of which were related to crop diversification and increasing dietary diversity. To date, it is unclear that these policy changes have had an effect in practice (Meerman, 2009; The World Bank, 2015a). Despite efforts by both the government and international partners, the majority of Malawians still suffer from food insecurity and crops are insufficiently diversified, which has led to, and continues to lead to, the high prevalence of stunting and malnutrition mentioned above (Sassi, 2012).

3.4 Methods

3.4.1 Survey Methods

Data collection tools as well as survey design are described in the Introduction (section 1.5). The general questionnaire (given to beneficiaries only) was used to collect data regarding factors potentially related to the achievement of food security (such as fertilizer usage, market access, and consumption). All beneficiaries and focus group participants were given the dietary diversity questionnaire, and from that scores were converted to HDDS and IDDS (described in section 3.4.2). The author used Stata to perform ordered logit regressions on the IDDS results, which are discussed later in this chapter.

3.4.2 Dietary Diversity Indicator

For years there was much debate regarding the most effective tool to evaluate dietary diversity (see Kant, 1996), however today one of the most common and validated tools is the Household Dietary Diversity Score (HDDS), created by the Food and Nutritional Technical

Assistance (FANTA) project (Swindale & Bilinsky, 2006). The HDDS is comprised of a short 24-hour recall survey, which takes roughly ten minutes to conduct and is seen as one of the best ways of assessing food consumption (Weeks, 2013). It can be administered at the household or individual level, which reflect socio-economic status and household food security, and nutrient adequacy respectively. The questionnaires are similar for both, however some non-nutritious foods are excluded in the calculation of the individual dietary diversity score. For example, the HDDS includes a category for sugar/honey, which is an indicator what the household is able to purchase or has access to; this category is excluded in the individual score as it does not contribute to good nutrition. For the purposes of this study the survey was conducted at the household level and analytic scoring was done at both the household and individual level. Respondents are asked what they ate in the last 24 hours, and the food categorized within sixteen food groups including: cereals, vitamin A rich vegetables and tubers, organ meats, eggs, oils and fats, and sweets, and marked with a 1 (consumed) or 0 (not consumed).

In order to analyze the HDDS, the scores are regrouped in order to form a score out of twelve rather than sixteen. Food groups rather than individual foods are used in the calculation because it is a better indicator of the quality of diet in terms of macro and micronutrients (foods of the same category provide similar nutrients) (Swindale & Bilinsky, 2005). There are no cut-off scores for the HDDS; rather they are used comparatively to see which groups are better off than others, either over all or by specific category (see Kennedy, Ballard, & Dop, 2011). Individual scores are regrouped to form a score out of 9, where categories such as beverages and sweets are not included.

The data collection period was in June-August 2014, which was during and immediately following the maize harvest period within Malawi.¹³ The results regarding dietary diversity found within in this study were collected during periods of relative abundance; HDDS and IDDS can be collected during post-harvest seasons, and it generally represents the usual diet of a household or individual (FAO Nutrition and Consumer Protection Division, 2008). Therefore the findings of this study reflect the dietary diversity for an average day during a

¹³ Malawi's lean-cropping season typically lasts from September to February, and the post-harvest season ifrom March to August (Chikhungu, Madise, & Padmadas, 2014).

post-harvest period, and do not reflect the dietary diversity during seasonal food shortages. Though some of the participants in our study are Muslim and were following Ramadan in July of that year, we were able to survey the majority prior to or following the fast dates; those who were fasting were not included in the HDDS survey.

3.5 Analysis

The analysis is divided in two sections. First is an investigation (3.5.1) of the effect of resettlement on food security more broadly by focusing on how the CBRLDP might have changed factors influencing the four pillars of food security. This includes an analysis of the HDDS scores of the households. Second is an analysis (3.5.2) of the Individual Dietary Diversity Scores of beneficiaries and non-beneficiaries to understand the factors that influence differences in IDDS and relate that back to the resettlement program.

3.5.1 Resettlement and Food Security

A voluntary resettlement program resulting in increased land holdings like the CBRLDP could have improved food security by factors that influence any of the four pillars of food security: access, availability, stability and utilization. We focus on five such factors that, in theory, the CBRLDP should have changed in ways that increase food security, namely: training, inputs, soil quality, market access including ability to sell crops, and consumption patterns. After examining each factor, Section 3.5.1 ends with an overall analysis of the HDDS as a proxy for food security.

3.5.1 i) Training

The CBRLDP specified input objectives for beneficiaries that included the provision of technical assistance for training in farm and production management, and ways in which to improve productivity (The World Bank Independent Evaluation Group, 2013, p. 17). Such training, in theory, provides skills farmers use to increase crop production and management, with obvious impacts on food security. Despite this, no studies have critically assessed the content of the training, and therefore the nature of training within the programme, as well as its effects on food security, are not well understood. One study did find that an increase in the diversity of crops grown by beneficiaries was likely the result of increased knowledge of soil quality and intercropping in the resettlement site (due to programme training) (Mueller et

al. 2014). When examined for this research, training was found to be limited in both coverage and scope. The survey asked participants whether or not they received any training, which was defined as a program where there was a hired trainer who conveyed knowledge on a topic. Only 28 percent of respondents said they did receive training, half of whom were on the executive committee (i.e. 14 percent were on the executive committee and received training).

In terms of training content, of those who received training, 50 percent received education regarding how to grow crops that are suited to the resettlement site, 24 percent were trained in an unspecified other, 16 percent were trained in conflict management (the majority of whom were on the executive committee), and two individuals claimed to be trained on nutrition/wild foods. Participants were able to indicate more than one type of training, and common secondary training included health (seven respondents), crop growth on resettlement site (1.6 percent), and nutrition and other (both one respondent, or 0.8 percent each). When asked to describe the training in their own words, 47 percent of those who received training described activities related to better crop management and some specified maize and cassava crops, 11 percent described crop use suited to the resettlement, 9 percent explained beneficiary cooperation, and another 9 percent described crop diversification strategies. Though not all beneficiaries received the training, and it was not consistent, those who did would be expected to be more food secure given their better understanding of soil quality or crop growth in their new home.

3.5.1 ii) Inputs

Unlike training, many more of the beneficiaries received fertilizer as part of their input packages. Fertilizer increases the productivity of soil by adding missing nutrients which can improve food production (and hence food security), however it can be expensive and revenues gained from selling excess crops are often offset by the cost of the inputs (Bezner Kerr, 2012). Malawian farmers have several options to reduce these costs, including the government subsidized FISP, Farmers Clubs (which are externally funded clubs that provide training and subsidized inputs for members), and the government funded Malawi Rural Development Fund (MARDEF) that offers loans to small farmers. Beneficiaries were asked if they were eligible for, or received fertilizer from any of the aforementioned programmes

since resettling; Table 3.1 summarizes the findings. Of particular interest is FISP, as it was one of the Government of Malawi's most widespread initiatives. In 2008/09, 65 percent of all farming households in Malawi received FISP coupons (Dorward & Chirwa, 2011), which is roughly the same percentage seen in this study. However, given that traditional authorities are responsible for distributing the coupons, being 'outsiders' to their new community disadvantages 'resettled' beneficiaries, and both beneficiaries and former beneficiaries described cases of coupons being withheld as described in Chapter 2.

Table 3.1 - Beneficiary Use of and Eligibility for Fertilizer Subsidy Programmes

<i>Fertilizer programme</i>	Since resettling, percentage of beneficiaries who received fertilizer from:	Since resettling, percentage of beneficiaries who perceived they were eligible to participate in:
Farm Input Subsidy Programme (FISP)	68.5%	95.6%
Farmers Club	14.8%	53.2%
CBRLDP	95.1%	93.1%
MARDEF (loans)	18.7%	53.7%
		<i>N = 203</i>

Former beneficiaries were also asked about their input usage, and the majority (48.1 percent) perceived they used more fertilizer on average than in the last year, while 37.0 percent believed they used less and 14.8 percent believed they used the same. CBRLDP participants received six bags of fertilizer in their starter pack (The World Bank Independent Evaluation Group, 2013), which would have contributed to the higher production levels described in Mueller et al (2014) and thus improved food security. However, some beneficiaries faced discrimination and were unable to receive FISP coupons, which would result in spending their income on inputs rather than food, or if they chose not to use fertilizer it would result in lower outputs. Overall, beneficiaries can be expected to be more food secure as a result of fertilizer access, however they were also more vulnerable to the discrimination that occurred as a result in the flaw of the FISP programme design (described in Chapter 2).

3.5.1 iii) Soil Quality

Related to fertilizer is soil quality, as soils that are sandy or overused require more fertilizer than nutrient rich earth. As such, soil quality can impact the productivity of a crop as well as

reduce the need for fertilizer; therefore the difference in soil quality between the sites was of interest to this study. 88 percent of respondents stated that their soil quality was better in the current plot compared to their plot in the district of origin, and 5.5 percent said it was the same and another 5.5 percent said it was worse now. However, this does not paint a complete picture for beneficiaries in all sites. In a focus group discussion with individuals who had moved back to their district of origin, Thyolo, after being resettled to Mangochi district, four separate individuals on separate occasions brought up the poor soil quality in their former resettlement sites. One participant poignantly observed:

I heard that this program [was] good because we can reduce our problems since we shall stay at a good land. But what happened was that, we sent a person [to the resettlement site], we gave him a hoe to test a soil but he did not test it at all. He was just drinking coca cola on his way. [Then] when we went there we slept at the bush, in the morning we saw that the soil was all sandy. We cultivated at our huts, when the rain came, we found that the land was flooding. Water was everywhere. We started to build benches for us to sleep. Everywhere was flooded. We asked the villagers there why the owner of this land decided to leave. People were telling us that he was trying to grow his different crops here but he was benefiting nothing. There is too much sand here. Okay where is he? He migrated and we don't know where he went. Ok we still stayed and but we were not harvesting maize (Focus Group #4, former beneficiaries - 31 July 2014).

This quote shows that experiences with soil quality were different for former beneficiaries compared to current, providing evidence that not everyone received good quality land. Given high population densities in villages of origin, beneficiaries could have previously been farming on hillsides or areas that never fallowed; therefore, it is not surprising that so many beneficiaries reported that the soil quality was higher in the resettlement site. However, reports of flooding and sandy soils were common amongst former beneficiaries in one focus group in particular. It seems possible that those who received land with better soil were more likely to stay in the resettlement site, while those who did not were more likely to leave. The high levels of reported better quality soil would also contribute a greater likelihood of improved food security.

3.5.1 iv) Market Access and Ability to Sell Crops

Access to markets is one of the contributing factors to food security in terms of the second pillar 'access': it is where small-scale farmers can sell crops to buy foods different from the

ones they grow at home. Market access is particularly critical for CBRLDP participants, as many resettled to remote sites located far away from roads and trading centers. Remoteness can result in fewer customers, longer distances to travel to reach customers, and fewer crops available to purchase. For the purposes of the survey, an effort was made to sample half from each remote and more central resettlement sites. Though it is not possible to make a quantitative statement regarding the spread of *all* programme beneficiaries across these areas, it does reflect the diversity of possible responses. The equal nature of sampling is biased towards an equal split of respondents; the reality of spread could be closer to either remote or central.

Beneficiaries were asked how they viewed their market access (in terms of proximity) compared to their village of origin. 46.3 percent believed to be worse off in the resettlement site compared to the village of origin, 37.4 percent were better off, and 16.3 percent saw no difference between the locations. Table 3.2 lists perceptions of market access by receiving district. Overall, the majority of the individuals who believed they were better off in the resettlement site had moved to Machinga, and those who were presently worse off were moved to Mangochi. This relates to the relative isolation of some sites, particularly in Mangochi district.

Table 3.2 - Beneficiary Perception of Market Access

<i>Access to markets</i>	Machinga as receiving district (N=100)	Mangochi as receiving district (N=102)
<i>Better off now</i>	62.0%	13.8%
<i>Worse off now</i>	24.0%	68.6%
<i>Same</i>	14.0%	17.6%

Beneficiaries were asked about their ability to sell crops, for which market proximity is an influencing factor, but broadly comprises all of the other possible ways to sell crops. Table 3.3 below details the specific places where farmers sell their crops. The majority sells to middlemen (58 percent) or to vendors coming directly to their home (4 percent). Relatively few take their products to the market directly (28 percent), which is indicative of the distance to markets and remoteness of the resettlement site. Several participants qualified their response by saying that more vendors came to their homes in the resettlement site.

Table 3.3 - Summary Statistics of Where Beneficiaries Sell the Most Crops

Where do you sell the majority of crops?	Frequency	Percent
Market	54	27.7
Middle man	118	58.4
Exchange	1	0.50
Consume all	5	2.48
Other (not specified)	1	0.50
Agora (fertilizer business)	2	0.99
National Smallholder Farmers' Association of Malawi (NASFAM)	1	0.50
Stall at home	3	1.49
Auction floor	2	0.99
To fishermen at the lake	4	1.98
To vendors directly at home	8	3.96
Sell firewood only	3	1.49
<i>Totals</i>	<i>202</i>	<i>100.00</i>

Respondents were asked which location they were able to sell more crops (resettlement, origin, or same). They were then asked why they believe they are able to sell more crops in that location. Table 3.4 below outlines the results of those questions. The majority of respondents who found it easier to sell in the district of origin claimed that their market access was better, whereas the majority who sold more in the resettlement site indicated it was because they produced more crops there. 9 respondents did not sell crops or did not know why the location was better. These conclusions are logical as districts of origin (Mulanje and Thyolo namely) have a much higher access to infrastructure than the resettlement districts (Machinga and Mangochi), and it has already been proven that beneficiaries produced more in their resettlement site than they had prior to moving (Mueller et al., 2014).

Table 3.4 - Summary Statistics of Why Beneficiaries Sell More Crops in Specified Locations

<i>Why sell more crops</i>	Location: District of Origin	Location: Resettlement Site	Same
<i>Access to markets is better</i>	56 (28%)	44 (22%)	4 (2%)
<i>Produce more crops</i>	11 (5.4%)	71 (35%)	0
<i>More help</i>	1 (0.5%)	1 (0.5%)	0
<i>Less people to feed</i>	1 (0.5%)	2 (1%)	0
<i>More vendors</i>	0	1 (0.5%)	0
<i>Part of a club</i>	0	1 (0.5%)	0
			<i>N = 193</i>

The 27 former beneficiaries who participated in the focus group discussions were also asked to compare how much they sold in the district of origin compared to resettlement. 51.9 percent (14 respondents) said they sold more in their current area (the district of origin), 8 of which believed this was due to an increased access of markets, and 6 said it was due to higher production levels. 40.7 percent (11 respondents) thought they sold more in the resettlement site, 10 individuals stated this was because they had higher production levels and one attributed it to a change in household consumption. Two respondents, or 7.41 percent, found no change between the sites.

Overall, beneficiaries were split in their perception of market access, where those living in Mangochi believed they were worse off, and those in Machinga believed they were better off. The difference in market access is likely due to the more remote location of resettlement areas. This remoteness was in part remedied by home visits from vendors and middlemen; yet due to a lack of competition when purchasing, middlemen could buy for lower prices than the beneficiaries would receive at the market, while the beneficiaries miss the opportunity to buy diverse foods that they would find at the market. Beneficiaries were also split in where they were able to sell more crops, likely related to a combination of decreased market access (for some) but higher production. The aforementioned findings have implications on food security, as a reduced market access means reduced access to diverse foods and beneficiaries are beholden to a few vendors, however they produce more crops in the resettlement site, and thus sell more (even if it is for a reduced price).

3.5.1 v) Consumption and HDDS as Proxies for Food Security Outcomes

Individuals' perspectives of their own consumption patterns can shed light on their food security, as they are most capable of noticing a change before or after resettlement. 94 percent of respondents stated that they consumed more food in the resettlement site compared to their village of origin, of whom 29 percent said it was primarily the result of higher crop yield associated with better soil quality, and 71 percent believed it was largely because they produced more due to having more land. Those statistics refer to the primary reason given, but 20 percent of all respondents attributed it to both causes. Overall this would indicate that the majority of participants had higher consumption in the resettlement site due to access to more land, which would agree with findings of Mueller et al (Mueller, Quisumbing, & Lee, 2014). Though this does not explain changes in food security in their entirety, as it does not address issues of access, sustainability, utilization, diversity nor the ability to sell in order to purchase, it does speak to the positive impact the program had on food amounts consumed.

The perceptions of consumption are contrasted by a comparison of HDDS between the beneficiaries, and a small sample of former and non-beneficiaries. We note, however, that there could be a positive bias in this sampling since households that elected not to move may have been more food secure in the first place, compared to their neighbours who moved to resettlement areas. Additionally, those that did not move may have had access to more land once households had resettled, though we do not have evidence for this, but rather for a continued increase in the density of places of origin – see Chapter 2.

The HDDS has been proven to be a good indicator of household food security as it demonstrates the purchasing power and specific consumption within a home (Swindale & Bilinsky, 2006). The HDDS of beneficiaries was compared with non-beneficiaries (a group of individuals comprised of 27 former beneficiaries who have relocated to their district of origin, and 19 individuals who had the opportunity to join the CBRLDP but elected not to). The average HDDS score for beneficiaries was 4.55 (N=196), with a range of 1-9, and was 5.13 (N=46) on average for non-beneficiaries with a range from 3-8. A Mann-Whitney Rank Sum test indicated that the difference between beneficiary and non-beneficiary HDDS values was statistically significant ($p=0.014$). Though the HDDS is a score out of 12, there is no

‘ideal’ value (Swindale & Bilinsky, 2006), and they therefore must be used comparatively. It can be said that scores of 4 and 5 can be categorized as ‘medium’ household dietary diversity (Kennedy et al., 2011), but the slight difference in values does indicate that overall non-beneficiary households are relatively better off. Though the averages were not vastly different, non-beneficiary households are more food secure than beneficiary households.

Additionally, comparing the scores from this study with those of a 2014 International Food Policy Research Institute (IFPRI) national study of food security in Malawi (N=11,280), the beneficiaries have a much lower score than the participants in the latter study. The overall average HDDS for individuals in 2010/2011 within the IFPRI report is 8.2, the average for rural poorest quintile is 6.1, and poorest quintile in the Southern region is also 6.1 (Verduzco-Gallo, Ecker, & Pauw, 2014). This puts those respondents in a ‘high’ level of dietary diversity (greater than 6), whereas beneficiary respondents averaged 4.55 and would have medium dietary diversity (scores of 4 or 5) (Kennedy et al., 2011). Therefore, beneficiaries are also less food secure than national averages.

Discussion

Though beneficiaries perceived that they consumed more food in the resettlement site, and findings of previous studies indicate that they produce more food there as well (Mendola & Simtowe, 2015; Mueller et al., 2014), this only indicates one form of food security (availability). Beneficiaries who remained in their resettlement site perceived to have higher quality soil on average compared to their district of origin, however this was contradicted by reports within focus group discussions with former beneficiaries. This indicates individuals who were in their resettlement site at the time of the survey had higher soil quality than if they had returned home, which would positively impact their agricultural productivity and thus contribute to improved food security in terms of availability. This does not, however, represent the program as a whole, as not all sites had relatively better quality soil, nor were soil qualities homogenous within the sites as well. Beneficiaries also had access to fertilizer at the resettlement site, and many former beneficiaries remarked that they had more access to fertilizers before they returned ‘home’ to their district of origin. Unfortunately, after the CBRLDP inputs ran out, some beneficiaries suffered the discrimination that is inherent in the

FISP programme (Holden & Lunduka, 2010; Javdani, 2012) that is also described in chapter 2, and were unable to access subsidized fertilizer.

Overall, about half the beneficiaries perceived their access to markets to have decreased, with variations depending on the resettlement district. On average, however, they sold more largely due to an increase in production. Interestingly, in the resettlement sites it was common for beneficiaries to sell to a middleman, which reduces their access to the goods sold at the market, and, with few vendors to sell to, it decreases the amount they can sell the crops for. Previous studies found that beneficiaries were growing more diverse foods, and hypothesized that this was due to beneficiaries having an increased knowledge of soil quality and intercropping in the resettlement site (Mueller et al., 2014). Yet this study found that only 28 percent beneficiaries within the sample received training, and of those who received training only 50 percent said it was related to soil management. The household dietary diversity score, which provides a more well-rounded view of household level food security, indicate that non-beneficiaries are more food secure on average than beneficiaries, and this finding is statistically significant. Further, comparing beneficiary HDDS results to national averages, beneficiaries have lower scores. This would indicate that though beneficiary households are able to produce more food due to a larger plot of land (or better soil) than those who remained in or returned to their village origin, they are not more food secure. Low HDDS scores, and thus food security, could be related to factors examined here including access to fertilizer inputs and markets (which have underlying causes in conflicts with new traditional authorities and remote locations).

3.5.2 The Effects of Resettlement on Dietary Diversity

As the name suggests, the individual dietary diversity score (IDDS) is a measure of an individual's dietary diversity. It is a proxy for nutrition, where it indicates the quality, rather than quantity of diet. Research Objective 4 (see Section 1.2) in this thesis, questions the effect of resettlement on dietary diversity; therefore, section 5.2 uses ordered logit regressions to determine the correlation between IDDS (the dependent variable) and various characteristics of beneficiaries including programme outcomes (independent variables). A standard logit model is used when the dependent variable can only take two values. In this

study, an ordered logit regression is used as the dependent variable (IDDS) can take multiple values that can be ordered (a score from 0-9).

The ordered logit is the estimate of a linear function of all the independent variables and the cutpoints related to the dependent variable. The probability of outcome i corresponds to the probability that the estimated linear function is within the range of cutpoints estimated for the dependent variable (Freese & Long, 2006). This is outlined in the model below:

$$P_i = P(k_{i-1} < \beta_1 x_{1j} + \beta_2 x_{2j} + \dots + \beta_k x_{kj} + u_j \leq k_i)$$

Where P is the probability that a respondent has an increase in individual dietary diversity score, k is the number of possible outcomes, x_1, \dots, x_{k-1} are the cutpoints, and β represents each independent variable. The binary logit model is:

$$P = 1 / (1 + e^{-y})$$

Such that P is the probability that a respondent has an increase of one unit of individual dietary diversity score, e is a constant and Y is the log odds of dependent variables.

Three models are outlined below, each assessing a different effect on the dependent variable, IDDS. The first model is a sample of the beneficiaries only, where the independent variables are include a the dummy variable ‘districts’ which indicates the district level resettlement pattern of the respondents, beneficiary characteristics, and other programme outcomes:

Model 1¹⁴

$$Y = \beta_0 + \beta_1 \text{totalamtcropssold} + \beta_2 \text{nonfarmer} + \beta_3 \text{districts2} + \beta_4 \text{districts3} + \beta_5 \text{districts4} + \beta_6 \text{districts5} + \beta_7 \text{districts6} + \beta_8 \text{fertilizers} + \beta_9 \text{farmtraining} + \beta_{10} \text{memberonEC} + \beta_{11} \text{gender} + \beta_{12} \text{education} + \beta_{13} \text{religion} + \beta_{14} \text{age} + \beta_{15} \text{typeownership1} + \beta_{16} \text{typeownership2} + \beta_{17} \text{typeownership3} + \beta_{18} \text{typeownership4} + \beta_{19} \text{typeownership5} + \beta_{20} \text{havetitledeed}$$

Model 2 and 3 use the full sample of beneficiaries and non-beneficiaries (where non-beneficiaries include individuals who were eligible to participate and elected not to, and

¹⁴ Size of household is omitted from this model due to collinearity.

former beneficiaries who returned to their district of origin). Model 2 compares the effect of IDDS and current district of all respondents, as well as age, gender, and religion:

Model 2

$$Y = \beta_0 + \beta_1 \text{curdist2} + \beta_2 \text{curdist3} + \beta_3 \text{curdist4} + \beta_4 \text{age} + \beta_5 \text{gender} + \beta_6 \text{religion}$$

Using the full sample of beneficiaries and non-beneficiaries, Model 3 compares the correlation between IDDS, beneficiary status, and the respondent characteristics in Model 2:

Model 3

$$Y = \beta_0 + \beta_1 \text{beneficiarystatus} + \beta_2 \text{age} + \beta_3 \text{gender} + \beta_4 \text{religion}$$

The dependent variable, IDDS Total is a calculation from a 16-category dietary diversity assessment, where to calculate the IDDS certain categories from the original questionnaire are omitted or combined in order to create a score out of nine (see section 3.4).¹⁵ This score represents individual dietary diversity rather than household level.

Amtcropsold is the total amount of crops sold annually in *Kwacha* (Malawi's currency), non-farmer refers to whether or not a respondent had at least one non-farming livelihood, fertilizers is the total number of fertilizer subsidy programs that the respondent received fertilizer from since moving to the resettlement site (with assistance from the following groups: FISP, farmers clubs, CBRLDP, MARDEF loans), training is a dummy variable representing whether or not the respondent received training from the CBRLDP, memberhhonec is a binary variable indicating whether or not the respondent had a household member on the Executive Committee, gender is the sex of the respondent, education is the number of years of schooling a respondent had, religion is a dummy variable for whether participants were Christian or Muslim, age is the age of the respondent, and have title deed is whether or not the respondent had the title deed to the property. Districts was transformed into 6 dummy variables, one for each movement pattern of beneficiaries, where 1 is Machinga to Machinga, 2 is Mangochi to Mangochi, 3 is Mulanje to Machinga, 4 is Mulanje

¹⁵ Three ordinal logit regressions were performed on a categorical IDDS, where 0-3 was low diversity, 4-5 was medium, and 6-9 was high. However there was insufficient variety in IDDS scores for these to provide results with high enough probabilities to make conclusions.

to Mangochi, 5 is Thyolo to Machinga, and 6 is Thyolo to Mangochi. Type of ownership is also a dummy variable: it represents the respondents perception of the type of land ownership he or she has in the resettlement site where 1 is don't know, 2 is customary, 3 is individual freehold, 4 is individual leasehold, 5 is group freehold and 6 is group leasehold. In Model 2, curdist is a dummy variable for the current district of all respondents, where 1 is Machinga, 2 is Mangochi, 3 is Mulanje and 4 is Thyolo, and in Model 3 beneficiarystatus is a binary variable that indicates whether or not the respondent is a current beneficiary or a non-beneficiary (including former beneficiaries). Table 3.5 below is a summary of the statistics for Model 1, and Table 3.6 summarizes the variables in Models 2 and 3.

Table 3.5 - Summary Statistics for Regression Model 1 Variables

N = 194

Variable	Description	Mean	Std. Dev.	Min	Max
<i>Dependent</i>					
iddsb9total	Individual Dietary Diversity Score (calculated), 0-9	3.634021	1.098788	1	7
<i>Independent</i>					
amtcropssold	Total amount of crops sold (in Kwacha) annually	61018.4	222382.7	0	3000000
nonfarmer	Respondent livelihood that is not farming, 0=no, 1=yes	.6494845	.4783659	0	1
districts2	District movement: from Mangochi to Mangochi, 0=no, 1=yes	.1443299	.3523332	0	1
districts3	District movement: from Mulanje to Machinga, 0=no, 1=yes	.1237113	.3301038	0	1
districts4	District movement: from Mulanje to Mangochi, 0=no, 1=yes	.1185567	.3241026	0	1
districts5	District movement: from Thyolo to Machinga, 0=no, 1=yes	.0360825	.1869779	0	1
districts6	District movement: from Thyolo to Mangochi, 0=no, 1=yes	.242268	.4295642	0	1
fertilizers	Received fertilizer from each of four common	1.948454	.8127371	0	4

Variable	Description	Mean	Std. Dev.	Min	Max
	fertilizer programmes (sum of 4 binary scores)				
training	Respondent given training by CBRLDP, 0=no, 1=yes	.2835052	.4799545	0	1
memberhhonec	Member of household on executive committee, 0=no, 1=yes	.3556701	.4799545	0	1
gender	Gender of respondent, 0=male, 1= female	.5670103	.4967713	0	1
education	Education of respondent (years)	4.07732	3.354558	0	12
religion	Religion of respondent, 0=Christian, 1=Muslim	.371134	.4843582	0	1
age	Age of respondent (years)	43.36082	15.63422	18	83
typeownership1	Perceived type of ownership: Don't know, 0=no, 1=yes	.2010309	.401808	0	1
typeownership2	Perceived type of ownership: customary, 0=no, 1=yes	.0103093	.1012712	0	1
typeownership3	Perceived type of ownership: individual freehold, 0=no, 1=yes	.7113402	.4543118	0	1
typeownership4	Perceived type of ownership: individual leasehold, 0=no, 1=yes	.0103093	.1012712	0	1
typeownership5	Perceived type of ownership: group freehold, 0=no, 1=yes	.0463918	.2108762	0	1
havetitledeed	Respondent household has the title deed, 0=no, 1=yes	.4536082	.4991312	0	1

Table 3.6 - Summary Statistics for Regression Models 2 & 3 Variables

N = 229

Variable	Description	Mean	Std. Dev.	Min	Max
<i>Dependent</i>					
iddsb9total	Individual Dietary Diversity Score (calculated), 0-9	3.71179	1.090184	1	7

Variable	Description	Mean	Std. Dev.	Min	Max
<i>Independent</i>					
curdist2	Respondent current district: Mangochi, 0=no, 1=yes	.4279476	.4958651	0	1
curdist3	Respondent current district: Mulanje, 0=no, 1=yes	.0742358	.2627285	0	1
curdist4	Respondent current district: Thyolo, 0=no, 1=yes	.0786026	.2697071	0	1
beneficiarystatus	District movement: from Mulanje to Machinga, 0=no, 1=yes	.1528384	.3606199	0	1
age	Age of respondent (years)	43.34498	15.52047	18	88
gender	Gender of respondent, 0=male, 1= female	.5545852	.4981003	0	1
religion	Religion of respondent, 0=Christian, 1=Muslim	.3275109	.4703334	0	1

Amount of crops sold and non farmer status were included in the model as income has a direct effect on what foods individuals are able to purchase (Thorne-Lyman et al., 2009). The number of fertilizer programs used by respondents was included because qualitative studies have found a link between poor soil quality in Malawi and low nutrition levels (Bezner Kerr & Chirwa, 2004; Bezner Kerr, Snapp, Shumba, & Msachi, 2007). As discussed in Chapter 2, the executive committee played a significant role in determining the location of resettlement site and how plots were distributed, and therefore those individuals could have chosen superior land; therefore presence of a household member on the executive committee was included as an independent variable. Gender was included as the questionnaire is typically given to the household member who prepares the food, who is often a woman, but this study was not able to do that in all accounts, and therefore inclusion of respondent gender accounts for that difference (Swindale & Bilinsky, 2006). Past studies have found that religion was a factor contributing to dietary diversity, and therefore it was included here (Savy, Martin-Prével, Sawadogo, Kameli, & Delpeuch, 2005). Education level and age have both been found to have an effect on dietary diversity and were thus included (Thorne-Lyman et al., 2009; Torheim et al., 2004). Training was included because it is a form of education, and

particularly relates to farming knowledge, but also because Mueller et al. (Mueller et al., 2014) hypothesized that beneficiary crop diversification was due to training. Much has been said in the literature speculating that official, Western style ownership status will increase the ability of farmers to invest in their land, and perhaps plant longer term crops (de Soto, 2000), and therefore the title deed and perception of ownership type were included. Given the significance of household size in affecting dietary diversity scores (Torheim et al., 2004), it was also included in original regressions but was omitted due to collinearity with education.

Table 3.7 summarizes the results of the Model 1 regression. Model 1 assesses the effect of the movement pattern of beneficiaries (district of origin to district of resettlement) on the individual dietary diversity score. The results of the regression show that the odds for the dummy variable for type of ownership 2 (beneficiary perception of having customary ownership in the resettlement site 1, or not customary, 0) are 21.3 times greater, compared to the perception of the actual type of ownership of group leasehold. These results are statistically significant ($p=0.043$), at 95 percent confidence interval (CI) (1.09, 417.76). However, given that the confidence interval is incredibly large, this leads to low confidence that the results are precise, and therefore this finding should be critically examined. The other perceptions of ownership, particularly those who perceived they had individual freehold (ownership type 3), which was the vast majority of the beneficiaries (72 percent; see Table 2.3 in Chapter 2), did not have a statistically significant effect on IDDS. Gender and religion, both are statistically significant at $p<0.1$ ($p=0.059$, $p=0.094$ respectively). For the gender dummy variable, for every unit increase in gender (i.e., an increase from 0, male, to 1, female) the odds were 0.55 times less likely to be a higher IDDS value (95% CI [0.29-1.02]). Similarly, for the religion dummy variable, one unit increase in religion (i.e., from Christian [0] to Muslim [1]) decreased the odds of having a higher IDDS value 0.52 times (95% CI [0.4-1.11]) – thus the odds were lower. One district level movement pattern was significant at $p<0.1$, and that was for beneficiaries who moved from Thyolo to Mangochi (Districts5; $p=0.099$). Those beneficiaries were 0.30 times more likely to have a higher dietary diversity score than individuals from those who moved internally within Machinga (Districts1) (95% CI [0.07-1.25]). None of the other beneficiary movements were significant. Gender, religion, and district movement from Thyolo to Machinga all had 95 percent confidence intervals that

crossed 1, and therefore there is a possibility that the sign related to each may be the opposite.

The majority of the signs of the coefficients are as expected, with the exception of non-farmer status and having a member of the household on the executive committee, neither of which are significant. Both have negative signs, but logically should be positive. Firstly, non-farming status is a binary dummy variable where respondents who reported to have at least one non-farming livelihood are represented with a 1, and those who only farm are represented with a 0. These beneficiaries should have more access to money and should be more resilient to crop failure, however this result can be explained by the remote location of their resettlement sites, and though they may have additional income they may not have access to diverse foods to purchase, or food is likely to be comparatively more ‘expensive’ than for farmers. Having a member of the household on the executive committee is expected to have a higher IDDS because those families could have received better land or more training, however this does not seem to have been the case, at least in terms of how these translate into higher IDDS. Both variables have 95 percent confidence intervals that cross 1, and therefore there is a probability that the signs are the opposite. Although the majority of the signs of the coefficients are as expected, the model overall is not significant ($p=0.210$), and therefore the results of this model must be treated with caution.

Table 3.7 - Model 1

Variable	Coefficient	Odds Ratio	95% Confidence Intervals
Total amount crops sold	8.26e-07	1.0000	0.99-1.00
Non farmer status	-0.2592	0.7717	0.38-1.55
Districts2	-0.0876	0.9161	0.36-2.29
Districts3	-0.1677	0.8456	0.32-2.20
Districts4	-0.3838	0.6813	0.24-1.90
Districts5	-1.1880*	0.3048*	0.07-1.25
Districts6	0.1433	1.1541	0.51-2.58
# Fertilizers	0.0649	1.0671	0.75-1.50
Training	0.4231	1.5268	0.80-2.89
Member of HH on EC	-0.2406	0.7861	0.44-1.40
Gender	-0.5928*	0.5527*	0.29-1.02
Education	0.0137	1.01378	0.92-1.11

Variable	Coefficient	Odds Ratio	95% Confidence Intervals
Religion	-0.6427*	0.5259*	0.24-1.11
Age	-0.0054	0.9946	0.97-1.01
Type of ownership1	0.2268	1.2546	0.16-9.59
Type of ownership2	3.0622**	21.3761**	1.09-417.76
Type of ownership3	1.0687	2.9115	0.42-19.86
Type of ownership4	-1.1107	0.3293	0.01-6.19
Type of ownership5	0.7375	2.0907	0.23-18.95
Have the title deed	-0.3968	0.6725	0.38-1.16
			<i>N</i> = 194
			<i>Prob</i> > <i>chi</i> ² = 0.2102
			<i>Pseudo R</i> ² = 0.0425

10% significance denoted with *; 5% significance denoted with **

Table 3.8 presents the findings from the ordered logit regression of Model 2. Model 2 compares the effects of the current districts for the entire sample, including both beneficiaries and non-beneficiaries, on the dependent variable that is the full individual dietary diversity score from 0-9. The results of model 2 indicate that for every one unit increase in the dummy variable curdist4 (i.e., not living in Thyolo district, 0, to living in Thyolo district, 1), results in 2.7 times greater likelihood to have a higher individual dietary diversity score, than compared to individuals in curdist1, Machinga District, with a 95 percent confidence interval (1.06-7.05). The findings were not significant for individuals living in Mangochi or Mulanje districts. Religion has a statistical significance at $p < 0.1$, where for one unit increase (i.e., moving from 0 to 1, or Christian to Muslim), results in a .51 times greater chance in having a higher IDDS, with a 95 percent confidence interval (0.35-1.01). The confidence interval crosses 0 and therefore the directionality of the effect is not certain, however, given that the $p = 0.055$, and the majority of the CI is below zero, it can be said that Muslim respondents are more likely to have lower IDD scores than Christians. Age and gender were not significant factors in determining the IDD score.

Table 3.8 - Model 2

Variable	Coefficient	Odds Ratio	95% Confidence Interval
Curdist2	-0.0911	0.9129	0.54-1.54
Curdist3	0.3492	1.4179	0.57-3.50
Curdist4	1.0079**	2.7399**	1.06-7.05
Age	-0.0100	0.9900	0.97-1.00
Gender	-0.3174	0.7280	0.44-1.19
Religion	-0.5108*	0.5999*	0.35-1.01
			N = 229
			<i>Prob > chi2 = 0.0158</i>
			<i>Pseudo R2 = 0.0228</i>

10% significance denoted with *; 5% significance denoted with **

Table 3.9 presents the findings from Model 3 ordered logit regression. As in Models 1 and 2, the dependent variable in Model 3 is the individual dietary diversity score. This model compared the beneficiary status, where a dummy variable was coded such that all beneficiaries were marked with a 0, and all non-and former-beneficiary respondents were coded with a 1. Beneficiary status was statistically significant ($p=0.035$), and that for a one unit increase in status (i.e., going from beneficiary to non beneficiary), the odds of a higher IDDS score are 2.03 greater, with a 95 percent confidence interval (1.04, 3.94). Again, as in Model 2, respondent age and gender were not statistically significant; this is important as sampling from women only is normative within the literature (Swindale & Bilinsky, 2006). Religion also had statistical significance ($p=0.051$), where for every unit increase in religion (i.e., increasing from 0, Christian, to 1, Muslim), the odds of being in a higher IDDS rank was 0.59 times higher, with a 95 percent confidence interval (0.35, 1.00). That is to say, Muslim respondents were more likely to have a less diverse diet than Christian respondents. As in Model 2, there is some possibility that the sign of the effect of religion is actually positive given that the CI crosses 1, but given that the majority of the confidence is less than 1, the effect is likely to be negative.

Table 3.9 - Model 3

Variable	Coefficient	Odds Ratio	95% Confidence interval
Beneficiary status	0.7110**	2.0361**	1.04-3.94
Age	-0.0097	0.9903	0.97-1.00
Gender	-0.3449	0.7082	0.43-1.15
Religion	-0.5181*	0.5956*	0.35-1.00
			<i>N</i> = 229
			<i>Prob</i> > <i>chi</i> ² = 0.0064
			<i>Pseudo R</i> ² = 0.0209

10% significance denoted with *; 5% significance denoted with **

Table 3.10 summarizes the findings from all three models, highlighting the significant independent variables.

Table 3.10 - Summary of Findings from 3 Regression Models

Model #	Dependent variable	Comparison	Summary of findings
Model 1	IDDS /9	Beneficiary movement locations, other factors related to resettlement, respondent characteristics and socio-economic status	Customary ownership is highly significant; Religion, Gender, Moving from Thyolo to Machinga is somewhat significant
Model 2	IDDS /9	Current district for all beneficiaries and non beneficiaries, and respondent characteristics	Living in Thyolo is highly significant; religion is somewhat significant
Model 3	IDDS /9	Beneficiary vs. non-beneficiary, and respondent characteristics	Beneficiary status highly significant, religion somewhat significant

Discussion

Very few studies of land reform have examined the effect of land reform, or resettlement in particular, on dietary diversity. Some have focused on nutrition in general, where one study of Zimbabwe found that resettled children had higher rates of severe chronic malnutrition than non-resettlement children (Kinsey, 1999). However, many studies have focused on agricultural productivity in general, particularly in the case of the CBRLDP, where they conclude that productivity did increase (Mendola & Simtowe, 2015; Mueller et al., 2014), which would suggest that there could be a similar increase in food security and potentially also dietary diversity. This section of Chapter 3 aimed to determine the effect of resettlement

pattern, current district, and beneficiary status had on the individual dietary diversity score of respondents. The regressions provide evidence that resettlement pattern does not have an effect on IDDS, but current district can and beneficiary status do.

The perception of ownership type was only statistically significant for respondents who believed they had customary ownership, compared to group leasehold (the actual type of ownership). Given the large confidence interval, and the low number of respondents who reported to perceive they had customary ownership in the resettlement site (0.99 percent) this result must be questioned. Given that the responses for the other types of ownership were not significant, it is more reasonable to conclude that the perceived type of ownership did not have an overall effect on IDDS.

Age, education, and training were not significant, and gender was only significant at $p < 0.1$ in Model 1. This is important given that IDDS questionnaire respondents are typically female, as the literature surrounding the dietary diversity score advises that the individual who prepares food for the family should take the questionnaire (Swindale & Bilinsky, 2006). This is less true of individual scores compared to household, as IDDS can serve to target a specific population, and due to limitations in survey design, women were not targeted specifically for this research. The lack of significance of gender in determining the dependent variable indicates that the limitation of the design in this regard did not negatively impact the data. The lack of significant of training casts doubts on the hypothesis of Mueller et al. (2014), who believed training was related to increase in more diverse crops grown. This is further supported by the limited number of beneficiaries trained and the type of training they received.

All three models found a statistical significance of religion on IDDS at $p < 0.1$, where Christian respondents were more likely to have a higher dietary score than Muslim respondents. This is similar to findings in the literature, where a study of nutritional status of women in Burkina Faso determined that Christian respondents had the highest IDDS, and Muslim respondents had the lowest (Savy et al., 2005). This could be due in part to dietary restrictions, where Muslims living in rural Malawi often do not raise pigs or eat pork.

The movement pattern of beneficiaries did not have an overall significance (see Model 1). There is substantial literature surrounding the importance of indigenous knowledge, and the important role it plays in context specific skills particularly for farmers (Hart & Vorster, 2006). Therefore the movement of beneficiaries from one district to another would seemingly be more likely to affect IDDS [negatively] than internal migration within a district, due to decreased production of crops related to a lack of institutional memory. The results found here are contrary to hypotheses that farming skills and practices may be better suited to one geographic location over another. One explanation is that the seeds, farming techniques necessary, and other aspects of farming were similar between the districts. Another is that the soil quality and conditions were in fact, better in the new district and more than offset the productivity losses associated with a move to a new farming environment, but productivity losses were more likely offset by the increase in land size given reports by some participants regarding poor quality of land.

Beneficiary movement is related to the findings of Model 2, where only individuals living in Thyolo were more likely to have a higher IDDS than individuals living in Machinga, and current district for respondents living in Mangochi and Mulanje did not have an effect on IDDS. The significance of living in Thyolo can be explained by external factors that are present in Thyolo, but not in Machinga or Mangochi, including access to markets, and alternative livelihoods (particularly working on the tea plantations). Good quality roads and proximity to other rural and urban centers could increase the diversity of what is available at the market. This was alluded to during a focus group discussion with one former beneficiary who said: *[Chichewa] “We made more money in Thyolo because [in the resettlement site] no one is buying. No one buys maize here and selling firewood is the only way to make money. We have to throw extra maize away. Here we have more land but no one to sell [maize] to.” (Beneficiary Chairman, personal communication, 30 June 2014).* If that is true of Thyolo, the physical and demographic similarities of Mulanje should result in similar findings from respondents living in that district. Differences between those two districts could be contextual.

Importantly, beneficiary status was significant, such that non-beneficiaries were more likely to have a higher IDDS than beneficiaries. Non-beneficiaries in this case included individuals

living in recruitment villages who were eligible to join but elected not to, as well as former-beneficiaries who left their resettlement site and returned to their village of origin. This is in line with the related findings by Kinsey (1999) in Zimbabwe. One possible explanation for these results is the remoteness of resettlement sites as mentioned above; non-beneficiaries were surveyed in Mulanje and Thyolo, two well situated districts in Southern Malawi that are known for tea estates, but offer tourism, alternative livelihoods (particularly on tea estates), and close proximity to both urban centers (Zomba and Blantyre), as well as infrastructure (including markets and roads). Individuals living in these areas are more likely to have higher income, as well as better access to markets wherein they could purchase and sell crops. Another potential contributing factor is soil quality, where many former-beneficiaries in qualitative interviews complained of dry soil prone to flooding in the resettlement site (however, many beneficiaries cited the problems associated with hilly landscapes in Mulanje and Thyolo). The relationship between dietary diversity and beneficiary status, as well as the effect of living in Thyolo, indicate that having a larger plot of land does not necessarily result in better quality diet, particularly when there are fewer alternate livelihoods, poor access to markets and roads, and potentially poor soil quality. Based on these findings, it is critical that the influence of resettlement location on dietary diversity – for both selling and purchasing foods - be considered with more attention in future resettlement projects.

3.6 Conclusion

Factors influencing small-scale farmer food security at both the input level and post-production scale were examined here. Though beneficiaries were often better off according to a number of factors influencing food security (including fertilizer, soil quality, and superior market access in some cases) this did not paint a complete picture, as demonstrated by qualitative information from the focus group discussions with former beneficiaries. Former beneficiaries raised concerns about infrastructure access and poor soil quality. Despite an overall sense of being ‘better off’ in terms of determinants of food security, the household dietary diversity scores showed that beneficiaries are less food secure than non-and-former beneficiaries. This outcome, however, cannot be attributed with certitude to the effects of resettlements given that there is no pre-settlement baseline data on the food security status of all households.

Nutrition results were not significant between beneficiaries, however regression models that included non-beneficiaries as well showed that current location and beneficiary status can have significant positive effects on diversity. Religion is also negatively significant at $p < 0.1$.

Based on the food security results, one must question the effectiveness of voluntary resettlement as a tool to address food insecurity: though it inconsistently improved some determinants, overall beneficiaries within the sample did not seem to be more food secure. Similarly, in comparing individual dietary diversity scores, non-beneficiaries had significantly higher scores than beneficiaries. Given that both food security and nutrition were worse amongst beneficiaries compared to non-beneficiaries, resettlement may not present itself as a useful policy tool to address global food security and malnutrition, when provisions are not made for infrastructure to reach markets or alternative livelihoods.

4. CONCLUSION

4.1 Summary of Findings

Voluntary resettlement has been promoted as a potential alternative to state-led resettlement schemes seeking to address poverty and food insecurity. Using Malawi's Community Based Rural Land Development Project as a case study, this thesis took a beneficiary perspective to understand their experience, as well as question the very nature of 'voluntary'. The analysis focused on the various factors and levels of understanding that influenced their decision to participate in the resettlement scheme, an assessment of the 'voluntary' nature of the project, and the effect of resettlement on food security. Specifically, informed consent was examined, as well as reasons to stay or leave, with a focus on perceptions of land ownership. Food security was evaluated through an examination of factors important for food security that would have been influenced by the program and the use of dietary diversity scores, where beneficiary scores were compared to former and non-beneficiaries, and statistical analyses tested for correlation of score differentials.

The study explored the notion of beneficiary 'power of choice' in deciding the location of their resettlement site. Over half of survey respondents said they were not included in the decision of the location of the resettlement site, and 54 percent felt that the Executive Committee decided the location. However, this limited participation appears not to have negatively affected the level of satisfaction of about location of resettlement, with 98 percent of survey respondents claiming they were "happy" with it. The results of in-depth interviews and focus groups point to more nuanced feelings of satisfaction, as nearly all former beneficiaries and some current beneficiaries (5 percent) explained that they were dissatisfied with aspects of soil quality and access to infrastructure that they were not made aware of prior to moving.

Informed consent was also analyzed, through assessments of perceptions of the resettlement site as well as land ownership. The above sentiments regarding satisfaction with the location of the land were also brought up during discussions with former beneficiaries regarding why

they left. Many discussed conflict and discrimination by communities already living in their resettlement location, and others mentioned a lack of access to infrastructure and livelihood opportunities. Further, opinions were drawn out during the attrition analysis, where some former beneficiaries reported that they returned to their village of origin due to poor soil quality or an inability to produce adequate crops, which was contrary to their expectations. For those beneficiaries, if they had been given the opportunity to visit the site prior to moving, they may not have resettled in the first place.

Chapter 2 also focused on beneficiary perceptions of land tenure, and contrasted those to the reality of the type of land tenure participants were given as a reflection of informed consent. Over 70 percent of respondents believed they had individual freehold, despite the actual tenure being group leasehold. The complexity surrounding ownership types, combined with the fact that beneficiary groups all shared one deed, and that they were perceived to be written in English is a further indication that informed consent was absent. Finally, the purpose of providing a form of land title that is not officially recognized was brought into question and raises concerns about the level of tenure security that it truly provides.

The assessment of consent and power of choice was book-ended by a study of the factors influencing participants to join and leave the programme. Overall, the majority of survey respondents said they joined due to a lack of land in the district of origin, though this response was higher in Mulanje and Thyolo than in Machinga and Mangochi, likely due to higher population densities in the former. Common reasons to leave the resettlement area included conflict with, and discrimination from new neighbours, as well as a lack of income opportunities and access to infrastructure. Chapter 2 concluded with an analysis of attrition rates among resettled households. Findings indicated that attrition varied greatly across and within beneficiary groups, but that district of origin was statistically significant in affecting the likelihood of returning home. Beneficiaries who lived in Mulanje were more likely to return home than individuals from Mangochi district. In-depth interviews suggested that this was likely due to Mulanje's greater opportunities, increased sense of community support, as well as better access to schools, hospitals and road networks. Individuals from Thyolo were not as likely to return home as beneficiaries from Mulanje, this is possibly due to the higher population density in Thyolo. This suggests that if given the 'choice' between living in the

district of origin with more amenities, and living in the resettlement district, participants are more likely to return home if there is adequate farm-land available.

Finally, the effect of voluntary resettlement on food security was assessed through a variety of methods. First, the findings from the survey suggested that beneficiaries perceive that they are more food secure in their resettlement site, which they generally explain as being the result of higher soil quality, increased crop production and larger crop sales. However these conclusions are contradicted by the results of former and non-beneficiaries, who argued that they are largely better off in their village of origin; for example, 56 percent believed they produced more in their district of origin. Survey results also disagree with beneficiary perceptions, as the statistical analysis of both the HDDS and IDDS indicate that beneficiaries are more food insecure than non-beneficiaries and former beneficiaries who have returned home. This is representative of the proximal relationship between the access to land and food security, where land is only one of the many necessary components to food security, along with social relations, access to livelihood alternatives, and others (Patel, Bezner Kerr, Shumba, & Dakishoni, 2015). Although beneficiaries can grow more food due to larger land holdings, the main crop grown is still maize. Given the limited market access, and potentially lower prices for selling crops, profits from maize are small, and beneficiaries cannot translate this larger volume of production into a more diverse and plentiful diet through the food they purchase. Furthermore, the remote locations of resettlement sites also may negatively influence the variety of what is sold. Again, this result signals the importance of including food security as a programme objective, and thus the necessary inputs and infrastructure to ensure it.

4.2 Strengths and Limitations of this Study

4.2.1 Strengths

A beneficiary perspective was used in this thesis in order to better understand the factors determining participation and withdrawal, the voluntary nature of resettlement, and the outcomes of voluntary resettlement on food security. As mentioned earlier in the text, land reform assessments often focus on broad project goals, however this study took a more nuanced approach to understand the specific experience of participants in terms of the voluntary and community-based context of this resettlement project. By presenting several

‘indirect’ dimensions, ranging from perceptions of ownership to nutritional status, the study’s findings helps to broaden and nuance the narrative of beneficiary experience, from pre-enrollment to post-project closure. The research included in this manuscript focuses on local and community-driven development, the new trend in participatory development, and adds novel perspective to the emerging field of land reform within LCDD.

4.2.2 Limitations

The limitations of the research mostly relate to the data collection process. In terms of the dietary diversity score survey, traditionally, the HDDS is given only to the individual in the household who is responsible for preparing food (Swindale & Bilinsky, 2006), who are often women. For the purposes of this study the individual who responded to the general survey also responded to HDDS questions, as they were taken consecutively. It would not have been appropriate to sample primarily from women in the general questionnaire, as the tool was designed to collect a range of diverse responses. As a result, one limitation of the study was that some respondents may not have known every ingredient used in the meals they ate. However when scores were compared between male and female respondents, the variability was not significant. Furthermore, sampling was done during harvest season, so any findings regarding food security and nutrition would indicate that respondents are better off than during lean periods. The survey was conducted just prior to start of Ramadan, and the focus groups were conducted just following; however none of the respondents were fasting during the 24-hour period before data collection. Finally, the FAO now advocates for multiple assessment tools to represent the dimensions food security or dietary diversity (FAO, 2013); however, this study used only the dietary diversity score, as well as additional survey and discussion question to assess food security and dietary diversity. The information provided here would have been strengthened by additional methods, but nevertheless shed light on the differences between the groups and their nutritional status.

Finally, the findings of this study can only reflect the perceptions of respondents, and as in other mixed methods studies, individuals could have replied with answers they thought were expected, or could have recalled information incorrectly. Therefore, the findings must be viewed as a case study of participant perceptions.

4.3 Implications of Research

Critiques of resettlement are not new. Sikor and Mullers (2009) advocated for community-led land reform strategies, and De Wet (2012) argued that it should be avoided at all costs. Though the CBRLDP did see some success (Mendola & Simtowe, 2015; Mueller et al., 2014), conclusions from this thesis state that more needs to be done to ensure informed consent and that provisions are made to provide participants with the tools and skills to have diverse diets. The findings of this research can be applied to develop improved policy in: decentralized development, land reform, and decentralized land reform. The three implications are outlined below.

4.3.1 Local and Community-Driven Development Policy

Community-Driven Development (later known as Local and Community-Driven Development ‘LCDD’) was coined in 1995, and includes participatory and decentralized approaches which can be applied to many forms of development (Binswanger & Aiyer, 2009) ranging from urban expansion to conservation. These initiatives are based at the intersection of the empowerment of communities, capacity building with local governments, and sustainability, and aim to address the problematic top-down bureaucratic approaches that the World Bank has struggled with in the past (Binswanger-Mkhize, de Regt, & Spector, 2009a). More international organizations, NGOs, and national governments are recognizing the merits of inclusive, bottom-up, development policy and are including community-based elements. Chapter 2 critically assesses levels of informed consent amongst participants, and the effects on their experience with the project. The finding that households considering resettlement should personally visit the new site and be given briefing on its pros and cons, and that they should be provided with a clear understanding of the potential gains and losses to consider when joining can be applied to all development initiatives that strive to be participatory.

4.3.2 General Land Reform Policy

Land reform is re-emerging as a popular strategy to address poverty and food insecurity in developing nations, but previous studies, and project evaluations in particular, often focus on the broad research objectives. General project goals are often intangible and do not reflect

the nuanced experience of participants and their complex reasoning to remain in the resettlement location. This thesis used a beneficiary perspective to understand the indirect and understudied outcomes, particularly as they relate to consent, land ownership, food security, and nutrition (dietary diversity). The findings should be used for future land reform policy that is inclusive of a more holistic understanding of beneficiary perceptions of the project, as well as factors that might lead them to abandon their resettlement site.

4.3.3 Land Reform Policy as part of Local and Community-Driven Development

As mentioned above, land reform is once again seen as a viable development strategy, however it has been revised to address past deficiencies (Deininger & Binswanger, 1999) and now some initiatives include elements of the World Banks' LCDD. The CBRLDP was one of the first community-based projects within land reform, and subsequently the World Bank has implemented spin-off projects such as the on-going Community Based Rural Development Project in Burkina Faso (The World Bank, 2015b). This research offers a critical and unique assessment of a participatory resettlement initiative, particularly aspects that are unique to LCDD such as consent, power of choice, and factors influencing participation and withdrawal. Chapter 2 of thesis addressed the understudied consent and power of choice amongst resettlement participants, which is critical to voluntary resettlement that aims to engage communities. The conclusions from the analysis can be used to create improved policy in LCDD land reform, which is particularly useful as this trend in resettlement and titling becomes ever-present in development practice.

4.4 Potential for Future Research

The information collected within this study present three avenues for future research: one case specific, one long term, and one that is applicable more generally.

First, more specific research should be conducted regarding the effect of the number and gender of children on attrition rates. Given that a matrilineal inheritance system is widespread in southern Malawi, heads of houses must divide their land amongst their daughters (Peters, 2010; Phiri, 1983). Preliminary field observations suggest that there may be a possible correlation between the number of female dependents in a beneficiary house, and their likelihood in remaining on the resettlement land. In particular, this notion was

suggested at the resettlement site with the highest level of attrition, where the remaining households also had high proportions of female children.

Second, the narrative regarding land-titling initiatives would benefit from a long-term study on the effects of the precarious type of tenure assigned to beneficiaries as part of the CBRLDP. The provision of a formalized bureaucratic style of ownership is defended by the theory that it provides recipients with more security and the ability to invest. More comprehensive research that focused on the effects of this unrecognized ownership on long-term security and economic stability are critical to the overall understanding of implementing novel policy. Moreover, the 2002 Land Act is likely to be enforced or modified in the future, and an understanding of the inclusion of the new type of beneficiary group land ownership is essential.

Finally, the use of such large cash incentives must be critically examined. Findings of this research indicate that some individuals may have joined simply for the financial benefit with no intention of staying in the new site. The monetary allocation for beneficiaries (US\$1,050) is over four times greater than the Atlas adjusted gross national income per capita in 2014 (US\$250);¹⁶ it is understandable that the project would be appealing. Therefore, the prevalence of corruption and attrition related to the bonus should be examined. Additionally, a comprehensive assessment of the merits between incentivized, and non-incentivized resettlement projects should be conducted. For example, the CBRLDP could be compared to the Million-Acre Scheme, another willing-seller willing-buyer resettlement initiative that took place in the 1960s in Kenya, and is often seen as ‘successful’. Unlike in CBRLDP, participants were required to purchase land with their own money, however this created a chasm between the middle class who could afford to participate, and landless peasants (Leo, 1981). A clearer understanding of the benefits and detriments to providing monetary encouragement to participants, with an outline of best practices, would be useful for land reform policy makers.

¹⁶ The World Bank Atlas method is a conversion factor to calculate gross national income (GNI) that reduces the impact of changes in exchange-rate when comparing country incomes (see <https://datahelpdesk.worldbank.org/knowledgebase/articles/378832-what-is-the-world-bank-atlas-method>)

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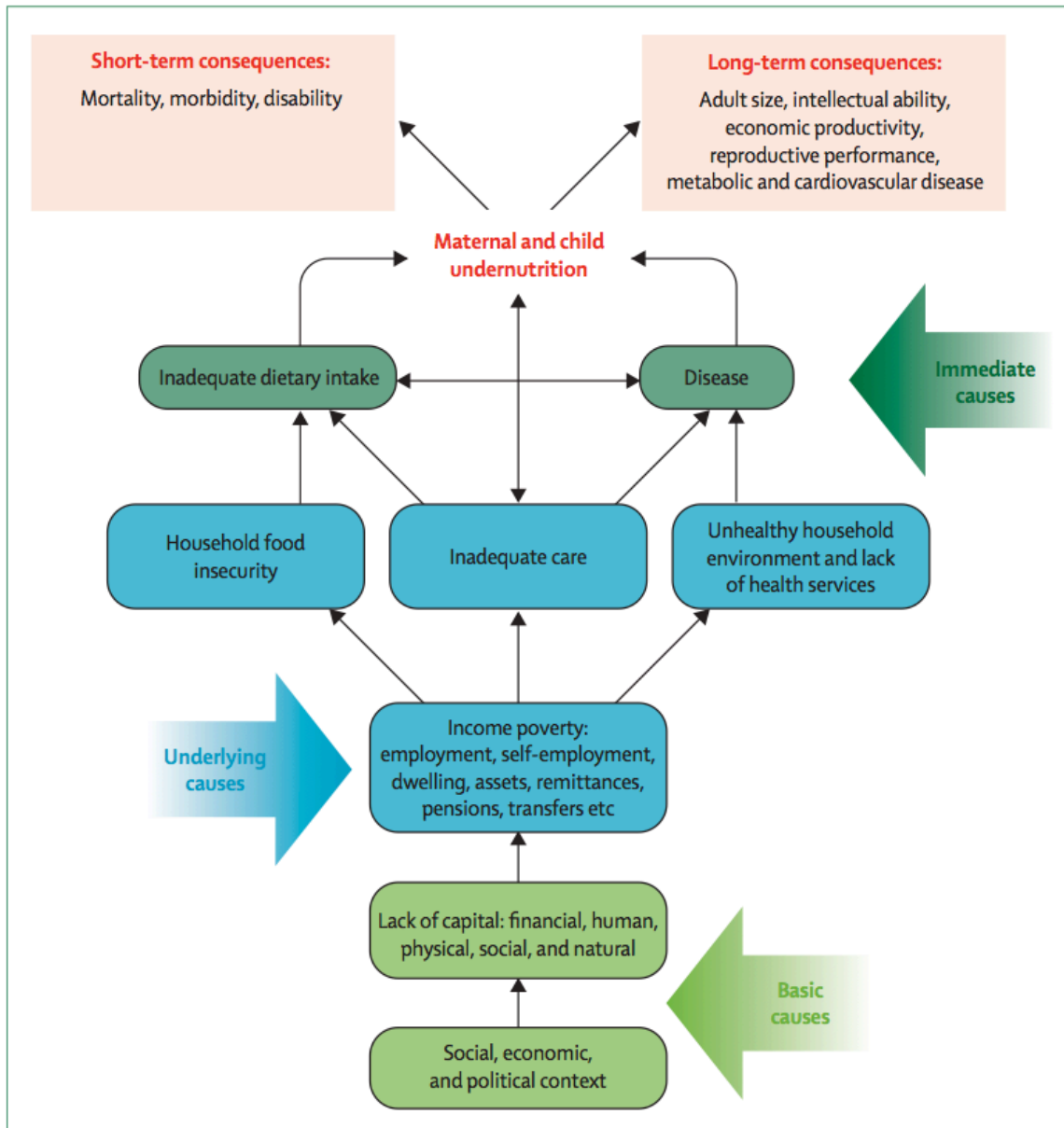
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Appendices

Appendix A: UNICEF Framework

Figure Appendix 1 - UNICEF Conceptual Framework on Undernutrition as adapted by Black et al (2008).



Source: (World Food Summit, 1996)

Appendix B: Semi-Structured Interview Guide

Interview:

Logics of voluntary resettlement in Southern Malawi; understanding the Community Based Rural Land Development Project

Introduction

I am from the University of British Columbia in Canada. We are doing a study about voluntary resettlement as a policy tool for food security and development. As such, we are interested in speaking with you about the Community Based Rural Land Development Project and your involvement in this project. Are you willing to be interviewed? The interview takes about 1 hour. You are welcome to stop any time or to choose not to answer a question if you are not comfortable doing so. Your identity will be kept anonymous, unless you give explicit written permission for it to be disclosed. Do you mind if I record the interview?

Record for each participant:

1. Name:
2. Gender:
3. Date, time & setting of interview
4. Location
5. Employment (Government - 1, NGO - 2, World Bank -3, Chief - 4, Other -5
[Specify])
6. What is your position in the above-mentioned job?

[The interview protocol presented here is a script but I will not ask all the questions of all interviewees, a selection of questions will be asked depending on the section of company they are involved in and their rules, and the interview itself will be semi-structured allowing for the natural flow of conversation.]

Expert interview guide:

1. What is your role in the community?

2. Were you in that position when the beneficiary groups were resettled?
3. Were you involved in the resettlement process (determining locations, making room etc), ?
4. Has your community ever had a conflict with the beneficiary groups?
5. What were the eligibility requirements, how did the government find these people?
6. Do you think the beneficiaries viewed the move as permanent?
7. What did you see was the biggest motivator for households joining the project?
8. How were beneficiaries selected for the project? What sort of advertising was used and what qualities were necessary requirements?
9. Do you think that this method of moving as a group/electing leaders would cause more conflict than others?
10. What percentage of the beneficiaries would you estimate have left the project? Where did they go and what is the most common reason for leaving?
11. Do most of the ex-Beneficiaries still own the land they purchased through the CBRLDP? Who lives on it? Is it common for households to live there part time? Please explain.
12. Do you think that female-headed households were more or less likely than male-headed households to volunteer and be successful once they resettled? Why? How do livelihoods and income sources factor in to this motivation and success?
13. What sort of training were the participants given? Do you feel this was adequate?
14. In general, have beneficiaries diversified their diet or crop production from their village of origin?
15. Were beneficiaries provided with adequate access to infrastructure?
16. In your view, was the project a success? Please explain. If it was a failure, what do you think led to the failing?
17. How did the GoM/World Bank recruit participants?
18. To what level was the public involved or consulted?

19. How do you view the participation and community based volunteering aspect of this project? Did it create a more successful project?
20. Do you think in this case, given the conditions of the land at the time and the lack of access of land for these people, that volunteering and community involvement was the best approach? Or should it have been forced?
21. Do you view this as a good policy? What would you see as more successful?

Appendix C: Focus Group Discussion Guide

Focus Group Discussion QUESTIONS for FORMER BENEFICIARIES

- A. [Topic: ATTRITION] To understand why former beneficiaries decided to leave their resettlement site and return home.
 - i. I would like to start by asking how many of you were members of the executive committee? Please raise your hands now if you were.
 - ii. Now please raise your hands if you were not part of the executive committee but someone in your family was.
 - iii. What were some of the main reasons you decided to join Kudzigulira Malo?
 - iv. Why did you decide to leave the resettlement location and beneficiary group? ****SPEND SOME TIME ON THIS QUESTION AND SEE PROMPTS BELOW****
 - v. How did the number and gender of your children affect your decision to stay or go?

- B. [Topic: PROJECT UNDERSTANDING] To understand how much information beneficiaries were given before they decided to join, and how much information was given before beneficiaries moved.
 - i. What was your understanding of the benefits of the project before you joined?
 - ii. How do those benefits differ from what you experienced?
 - iii. Did you receive any training? If so on what?

- C. [Topic: DIFFERENCES IN LOCATIONS] To understand how former beneficiaries perceive the differences between resettlement location and location of origin regarding access to infrastructure, community and nutrition.
 - i. How did the resettlement site compare to your village of origin? ****SEE PROMPTS BELOW***

- D. [Topic: LAND TENURE] To understand beneficiary interpretation of their status of land tenure, and their value of land tenure.
 - i. What type of land ownership did you have there and what do you have here? Please describe the differences.
 - ii. How many of you received the title deed? Please raise your hands.
 - iii. What did the program offer/promise to you regarding the title deed and land ownership?
 - iv. What has happened to your land in the location that you left it? [Do you still own it? Did they divide it up? Is one of your children taking care of it? Did you sell it?]

- E. [Topic: PERCEPTIONS OF PROGRAMME SUCCESS] To understand beneficiary perception of participation in the project (including its success), and to what extent it was ‘voluntary’ resettlement.
- Overall, do you feel as though you were included in the resettlement process?
 - How do feel about the programme? Was it a positive experience or negative? Please explain?
 - What do you think could have been done differently to make the programme more successful? What things should remain the same?

Focus Group Discussion QUESTIONS for NON-BENEFICIARIES

- A. To understand type and quality of information potential beneficiaries were given prior to participation in the project.
- Please describe the recruitment process of Kudzigulira Malo in your community.
- B. To understand why eligible individuals elected not to participate in Kudzigulira Malo.
- What were the benefits that Kudzigulira Malo promised if you joined?
 - Please explain why you decided not to join.
 - Are you happy that you decided not to join? Please explain.
- C. To understand what sort of conflict exists in their current location.
- Do you have any conflicts in your current location?
- D. To understand the external perceptions of the project.
- How do you view the project now as an outsider?
 - How many beneficiaries decided to return home and what was their reintegration like?

Probes for discussion:

- *Participation in the decision process (BENEFICIARIES ONLY)*
 - *Part of the executive committee*
 - *Voted for the executive committee*
 - *Location of site*
 - *Location of plots on the site*
- *Reasons to move back (BENEFICIARIES ONLY)*
 - *Conflict (see below)*
 - *Poor crop yield*
 - *Poor soil quality*
 - *More employment opportunities in village of origin*
- *Land tenure*
 - *Freehold/Leasehold*

- *Held the title deed?*
 - *Matrilineal system?*
 - *Number of male children and female children*
- *Conflict*
 - *Land*
 - *With estate owners*
 - *With government/Chiefs/GVH*
 - *With other beneficiaries*
 - *With non –beneficiaries in resettlement site*
 - *With neighbours*
- *Access to infrastructure*
 - *Water*
 - *Education*
 - *Health*
 - *markets*
- *Fears of moving*
 - *Access to infrastructure*
 - *Moving away from community*
 - *Burial locations*
- *Community*
- *Nutrition/cash crops*

Appendix D: Dietary Diversity Questionnaire

Dietary Diversity Questionnaire at the Household Level

We would like to ask you some questions about your household food consumption yesterday. Who would be the best person to ask? [Husband/wife/eldest daughter, etc]

Yesterday did your household eat at any weddings, celebrations, or feasts? _____

If the answer is yes then discontinue the survey. We are only interested in typical consumption for individual households.

Please describe the foods (meals and snacks) that any member of the household ate or drank yesterday during the day and night, *exclude* foods that were purchased and eaten outside the home. Start with the first food or drink eaten in the morning.

Write down all the food and drinks mentioned. When the composite dishes are mentioned, ask for the list of ingredients. When the respondent has finished, probe for meals and snacks not mentioned. Exclude foods purchased and eaten outside the home. Indicate whether the food was grown at home or bought in the market.

Breakfast	Snack	Lunch	Snack	Dinner	Snack

Indicate which of the ingredients were purchased at the market and which were grown at home

Grown at home = 1	Purchased at the market = 2	Don't know = 3

Question	Food Group	Examples	Yes=1 No=0
1	CEREALS	Maize, rice, millet, etc	
2	VITAMIN A RICH VEGETABLES AND TUBERS	Pumpkin, carrots, etc	
3	WHITE ROOTS AND TUBERS	Irish potatoes, cassava, etc	

4	DARK GREEN LEAFY VEGETABLES	Rape, pumpkin leaves, etc	
5	OTHER VEGETABLES	Tomato, onion, wild foods	
6	VITAMIN A RICH FRUITS	Papaya, mangoes, etc	
7	OTHER FRUITS	Other fruits including fruit	
8	ORGAN MEAT	Liver, kidney, heart, etc	
9	FLESH MEATS	Beef, pork, goat, rabbit, chicken	
10	EGGS	Chicken, duck, pigeon, etc	
11	FISH	Fresh or dried	
12	LEGUMES, NUTS AND SEEDS	Beans, nandolo, groundnuts, etc	
13	MILK AND MILK PRODUCTS	Milk, cheese, etc	
14	OILS AND FATS	Used for cooking / added	
15	SWEETS	Sugar, honey, soda, biscuits, etc	
16	SPICES, CONDIMENTS, BEVERAGES	Spices (salt, pepper), nali, tea, etc	
Total =			

****READ THE ANSWERS FOR ALL QUESTIONS
CIRCLE THE ANSWERS:**

DD1) How has your total crop production (outputs) changed from your resettlement site?

Produce more now = 1
Produce less now = 2
Produce the same = 3

DD2) How has the diversity of crops you produced changed from when you lived in your resettlement site?

More diverse crops now = 1
Less diverse crops now = 2
Same diversity now = 3

**DD3) IF YOU LIVED IN YOUR RESETTLEMENT VILLAGE FOR OVER 1 YEAR:
Compared to the amount of farming inputs (fertilizer) you used on average with Kudzigulira Malo, how many farm inputs (fertilizer) did you use this year?**

More inputs now = 1
Fewer inputs now = 2
Same = 3

DD4) How much do you sell compared to your resettlement village?

Sell more now = 1
Sell less now = 2
Sell the same = 3

DD5) If there was a change in how much you sell, why?

Access to markets = 1

Production levels = 2

Changes in household consumption = 3

DD6) Any further comments about

Appendix E: General Questionnaire

SURVEY No.: _____

UNDERSTANDING THE IMPACTS OF KUDZIGULIRA MALO

Receiving District: _____

District of Origin: _____

Receiving TA: _____

TA of Origin: _____

Receiving Village (Official Name): _____

Village of Origin: _____

Receiving Village (New Name): _____

Household ID: _____

Name of Head of Household: _____

Name of Enumerator: _____

Name of Respondent: _____

Date of Survey: _____

Name of Beneficiary Group: _____

ORAL CONSENT RECEIVED: _____

PART A: Demographics and household roster

A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Respondent relationship to head of household: SEE CODE BELOW	Respondent age:	Respondent sex: Male = 1 Female = 2	Respondent education level (Indicate number of years and certificates received if applicable)	Household Ethnicity	Household Religion	What type of kinship system did your family practice in your village of origin? Matrilineal = 1 Patrilineal = 2	What type of kinship system does your household practice now? Matrilineal = 1 Patrilineal = 2	How many adults (over 18) in this household are male?	How many adults (over 18) in this household are female?

<u>CODES FOR A1 RELATIONSHIP TO HH</u>	<u>CODES FOR A5 ETHNIC GROUP</u>	<u>CODES FOR A6 RELIGION</u>
1=HEAD 2=WIFE OR HUSBAND 3=SON OR DAUGHTER 4=SON/DAUGHTER-IN-LAW 5=GRANDCHILD 6=PARENT 7=PARENT-IN-LAW 8=OTHER RELATIVE 9=ADOPTED/FOSTER/STEP CHILD 10=NOT RELATED 11=DON'T KNOW	1= YAO 2= CHEWA 3= NYANJA 4= TUMBUKA 5= NGONI 6= LOMWE 7= SENA 8= TONGA 9= NGONDE 10= OTHER (SPECIFY)	1= CHRISTIAN 2= MUSLIM 3= NONE 4= OTHER (SPECIFY)

PART B: Livelihoods and Socioeconomic Status

B1	B2	B3	B4	B5	B6	B7	B8
How many children in the household are too young to contribute to the family's income?	How many children in the household are under 18 but are old enough to contribute to the household income (ganyu, farming, etc)?	How many livestock do you have of each of the following:	How much of each of the following cash crops have you sold or are in storage for this season (in Malawi Kwacha)?	Do you have any of the following items in your household? Yes = 1 No = 2	What are the five most important livelihoods that employ members of this household? (SEE CODES) LIST ALL [if there are fewer than 5 livelihoods then list only those that apply]	In what seasons are each occupation done: Dry season = 1 Rainy season = 2 All year = 3 Other (specify) = 4	At what location are each occupation done: Resettlement site = 1 Village of origin = 2 Other (Specify) = 3
		Pigeons	Maize	Radio			
		Poultry	Tobacco	Chairs			
		Sheep/goats/pigs	Cotton	Table			
		Cows	Rice	Bed			
		Rabbits	Soya	Mattress			
		Other (specify)	Other (specify)	Bicycle			
				Cell phone			
				Other (specify)			

CODES FOR B5 OCCUPATION CATEGORY:

1 = Farmer	6 = Fish smoker
2 = Fisher	7 = Teacher
3 = Small business/store	8 = Healthcare worker
4 = Ganyu/Piecework	9 = Government-general
5 = Seamstress/tailor	10 = Other (specify)

Part C: Beneficiary group characteristics

C1	C2	C3	C4	C5	C6	C7	C8	C9
What year did your beneficiary group move to this site?	How many households were in your trust/beneficiary group when you first moved?	How many households from your original trust have now left the resettlement area?	Where did the majority of those households go? READ ANSWERS Don't know = 0 District of origin = 1 New location in resettlement district = 2 New district = 3 Other (Specify) = 4	Was someone from your household on the executive committee? READ ANSWERS Yes = 1 No = 2	How many people were on the executive committee when you first moved to the resettlement site?	How many individuals on the executive committee were: [Make a note below if any of the people in the elderly/disabled category are also women]	How many members of the original executive committee have left the resettlement area?	Where did the majority of the executive committee members who left the resettlement site go? READ ANSWERS Don't know = 0 District of origin = 1 New location in resettlement district = 2 New district = 3 Other (Specify) = 4
						Disabled/ Elderly		
						Women		

PART D: Participation in Kudzigulira Malo and Perceptions of Program Success

D1	D2	D3	D4	D5	D6	D7	D8	D9
Rank the components of the program that were most appealing to you when you joined. [SEE ANSWER KEY BELOW] [Include the three most important – if only one is important only include one]	Why did you choose to participate? [ANSWER IN A FEW WORDS BELOW] [CHOOSE ONE REASON ONLY] eg. Conflict over land in village of origin	Have you had any conflict with anyone in your resettlement site? READ ANSWERS Yes = 1 No = 2	If NO to D3, skip to D6. If YES to D3, who was the conflict with? (SEE CODE LIST BELOW) PROMPT ONLY WHEN NECESSARY *BE MINDFUL NOT TO LEAD THE PARTICIPANTS	If YES to D3, What was the conflict about? ANSWER IN A FEW WORDS BELOW eg. Location of land	Have you ever considered leaving the resettlement district since you arrived? READ ANSWERS Yes = 1 No = 2	If NO to D6, skip to D9. If YES to D6, why did you want to leave? ANSWER IN A FEW WORDS BELOW [CHOOSE ONE REASON ONLY] eg. Conflict with GVH in resettlement site	Why did you choose to stay? READ ANSWERS INCLUDE ALL THAT APPLY	How do you view your wellbeing now compared to your wellbeing in your district of origin? READ ANSWERS Better off now = 1 Worse off now = 2 Same = 3

CODES FOR D1
A = Land access
B = Money for farming
C = Money for moving
D = Moving as a group
E = Training
F = Land ownership

CODES FOR D4:
1 = Traditional authority/GFH in resettlement site
2 = Own household members
3 = Beneficiaries in resettlement site
4 = Non-beneficiaries in resettlement site
5 = Executive committee members
6 = Estate owners
7 = Other (specify)

PART E: TRAINING

****PROVIDE THE PARTICIPANTS WITH THIS DEFINITION OF *TRAINING*: “Let’s say training is when you are invited to participate in a program and there is a hired trainer to convey knowledge...”

<p>E1</p> <p>Were you given any farming or farming input training by Kudzigulira Malo?</p> <p>Yes = 1 No = 2</p>	<p>E2</p> <p>If NO to E1 skip to E3. If YES to E1, for how long?</p> <p>[INDICATE DAYS, HOURS, BELOW]</p> <p>*THIS NUMBER SHOULD BE AN ESTIMATION ONLY</p>	<p>E3</p> <p>Who led the trainings?</p> <p>DON’T READ ANSWERS</p> <p>PROMPT ONLY WHEN NECESSARY</p> <p>Don’t know = 0 Village head = 1 Kudzigulira Malo official = 2 Government employee = 3 Other (specify) = 4</p>	<p>E4</p> <p>Did you receive training on any of the following by Kudzigulira Malo:</p> <p>READ ANSWERS</p> <p>INCLUDE ALL THAT APPLY</p> <p>Don’t know = 0 Crops that grow well in resettlement site = 1 Nutrition = 2 Wild foods = 3 Importance of diverse foods = 4 Health related to nutrition = 5 Conflict management = 6 Did not receive any other training = 7 Other (specify) = 8</p>	<p>E5</p> <p>Do you feel the training was sufficient?</p> <p>Yes = 1 No = 2</p>

E10: If you indicated that you had training in E4, please describe in words your training on farming inputs, nutrition and health related to food consumption:

PART F: QUESTIONS OF LAND OWNERSHIP

<p>F1</p> <p>What type of land ownership do you have on this plot?</p> <p>READ ANSWERS</p> <p>*EXPLAIN EACH TYPE OF OWNERSHIP IF NECESSARY</p> <p>Don't know = 0 Customary = 1 Individual/Freehold = 2 Individual/Leasehold = 3 Group/Freehold = 4 Group/Leasehold = 5</p>	<p>F2</p> <p>Is this your preferred type of ownership?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>	<p>F3</p> <p>If not then what type do you prefer?</p> <p>READ ANSWERS</p> <p>Customary = 1 Individual/Freehold = 2 Individual/Leasehold = 3 Group/Freehold = 4 Group/Leasehold = 5</p>	<p>F4</p> <p>What type of land ownership did you have in your village of origin?</p> <p>READ ANSWERS</p> <p>Don't know = 0 Customary = 1 Individual/Freehold = 2 Individual/Leasehold = 3 Group/Freehold = 4 Group/Leasehold = 5 Did not have=6 Borrowed = 7</p>	<p>F5</p> <p>Do you have the title deed for this land?</p> <p>*EXPLAIN TITLE DEED IF NECESSARY</p> <p>Don't know = 0 Yes = 1 No = 2</p>	<p>F6</p> <p>If yes, have you ever used the title deed for a loan?</p> <p>Don't know = 0 Yes = 1 No = 2</p>	<p>F7</p> <p>Were you given different choices for the type of land ownership?</p> <p>READ ANSWERS</p> <p>Don't know = 0 Yes = 1 No = 2</p>	<p>F8</p> <p>Is having the title deed to land important to you?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>

PART G: Inclusion and Participation

<p>G1</p> <p>Who made the decision regarding location of resettlement site?</p> <p>DON'T READ ANSWERS</p> <p>PROMT ONLY WHEN NECESSARY</p> <p>Don't know = 0 Chief/VHM in village of origin = 1 Chief/VHM in resettlement site = 2 Executive Committee = 3 All households in Beneficiary group = 4 Kudzigulira malo official = 5 Other (specify) = 6</p>	<p>G2</p> <p>Were you included in the decision regarding location of resettlement?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>	<p>G3</p> <p>Are you happy with the resettlement <i>location</i>?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>	<p>G4</p> <p>If you have challenges at this location, what are the biggest challenges for you?</p> <p>DON'T READ ANSWERS</p> <p>[SEE ANSWER KEY BELOW]</p>	<p>G5</p> <p>Who decided how plots were distributed within your resettlement site?</p> <p>READ ANSWERS</p> <p>Don't know = 0 Chief/VHM in village of origin = 1 Executive committee = 2 Beneficiaries = 3 Government = 4 Kudzigulira official = 5 Other (specify) = 6</p>	<p>G6</p> <p>Was plot distribution fair?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>	<p>G7</p> <p>If YES to G6 skip to G9. If NO to G6 what was unfair?</p> <p>DO NOT READ ANSWERS</p> <p>PROMPT ONLY WHEN NECESSARY</p> <p>Unequal soil quality = 1 Unequal access to water point = 2 Unequal size of plots = 3 Unequal amount of money for inputs received = 4 Other (specify) = 5</p>	<p>G8</p> <p>If NO to G6, who received the best land?</p> <p>DO NOT READ ANSWERS</p> <p>PROMPT ONLY WHEN NECESSARY</p> <p>Don't know = 0 Executive committee = 1 Friends or family of executive committee = 2 Beneficiaries = 3 Other (specify) = 4</p>	<p>G9</p> <p>Who has the ultimate control over the decisions regarding your land?</p> <p>READ ANSWERS</p> <p>Don't know = 0 My own household = 1 Executive committee = 2 Other beneficiary group members = 3 Neighbours outside the beneficiary group = 4 Traditional authority/GVH = 5 Government of Malawi = 6 Other (specify) = 7</p>

CODES FOR G4
Lack of access to water = A
Lack of access to schools = B
Lack of access to health care = C
Lack of access to markets = D
Lack of family nearby = E
Lack of community nearby = F
Inputs too expensive = G
Soil quality = H
Conflict with beneficiary group = I
Conflict with non beneficiary neighbours = J
Conflict with authorities = K
Other (specify) = L

PART H: Governance & Part J: Sense of community

<p>H1</p> <p>How was the executive committee formed?</p> <p>READ ANSWERS</p> <p>Don't know = 0 Democratically elected = 1 Appointed by Government of Malawi = 2 Appointed by Traditional Authority = 3 Appointed by Kudzigulira Malo representative = 4 Self-appointed = 5 Other (specify) = 6</p>	<p>H2</p> <p>In your opinion, was this process fair?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>	<p>H3</p> <p>Did the executive committee consult the other beneficiaries for major decisions (such as location of resettlement site)?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>	<p>H4</p> <p>Today, do you think the committee did a satisfactory job?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>	<p>J1</p> <p>Is your household related to members of any of the other households in your beneficiary group?</p> <p>READ ANSWERS</p> <p>Yes = 1 No = 2</p>	<p>J2</p> <p>Where do you find a greater sense of community?</p> <p>READ ANSWERS</p> <p>District of origin = 1 Resettlement district = 2 Elsewhere (specify) = 3</p>	<p>J3</p> <p>Where do you think your children would have a better future?</p> <p>District of origin = 1 Resettlement district = 2 I don't have children = 3</p>

PART K: Access to infrastructure

<p>K1</p> <p>Where do you sell the majority of your crops?</p> <p>READ ANSWERS</p> <p>Market = 1 Middle man = 2 Exchange = 3 Consume/keep all = 4 Other (Specify) = 5</p>	<p>K2</p> <p>If you sell crops, in which location is it easier for you to sell your crops:</p> <p>READ ANSWERS</p> <p>*If they don't sell crops write N/A</p> <p>District of origin = 1 Resettlement district = 2</p>	<p>K3</p> <p>If you answered K2, why are you able to sell more crops in that location?</p> <p>INCLUDE ALL THAT APPLY</p> <p>Don't read answers – use only as prompts when necessary</p> <p>Don't know = 0 Access to markets is better = 1 Produce more crops = 2 More help in the farm = 3 Less people to feed (ie more surplus crops) = 4 Other (specify) = 5</p>	<p>K4</p> <p>How do you view your access to markets compared to your village of origin?</p> <p>READ ANSWERS</p> <p>Better off now = 1 Worse off now = 2 Same = 3</p>	<p>K5</p> <p>What is the source of water on this [PLOT]?</p> <p>READ ANSWERS</p> <p>Well = 1 Borehole = 2 Lake/Pond = 3 River/Stream = 4 Other (Specify) = 5</p>	<p>K6</p> <p>How do you view your access to water compared to your village of origin?</p> <p>READ ANSWERS</p> <p>Better off now = 1 Worse off now = 2 Same = 3</p>	<p>K7</p> <p>How do you view your access to health care compared to your village of origin?</p> <p>READ ANSWERS</p> <p>Better off now = 1 Worse off now = 2 Same = 3</p>	<p>K8</p> <p>How do you view your access to schools compared to your village of origin?</p> <p>READ ANSWERS</p> <p>Better off now = 1 Worse off now = 2 Same = 3</p>	<p>K9</p> <p>Where do your children attend school?</p> <p>READ ANSWERS</p> <p>District of origin = 1 Resettlement district = 2 Other (specify) = 3 Do not attend = 4</p>

PART L: Soil quality and fertilizer subsidies

<p>L1</p> <p>Since you moved to the resettlement district, have you received fertilizer from any of the following:</p> <p>Yes = 1 No = 2</p>		<p>L2</p> <p>Are you eligible to participate in the programs listed in L1 (given your status as a Kudzigulira Malo beneficiary)?</p> <p>Yes = 1 No = 2</p>	<p>L3</p> <p>Where does your household consume more food on average?</p> <p>READ ANSWERS</p> <p>Resettlement site = 1 Village of origin = 2</p>	<p>L4</p> <p>Why does your household consume more food there?</p> <p>DON'T READ ANSWERS BUT OFFER PROMPTS</p> <p>Higher crop yield from better soil quality = 1 Higher crop yield from more land = 2 More cash/purchase more = 3 Better storage (less crop loss) = 4 Other (specify) = 5</p> <p>*choose all that apply</p>	<p>L5</p> <p>How does the soil quality on this plot compare to where you were living before?</p> <p>READ ANSWERS</p> <p>Better = 1 Worse = 2 The same = 3</p>
<i>Type</i>	<i>Response (1 or 2)</i>	<i>Response (1 or 2)</i>			
Subsidy Programme					
Farmers club					
Kuzigulira Malo					
MARDEF (Loans)					

PART M: Do you have any further comments regarding Kudzigulira Malo and your experience with the project?