

University of Southampton Research Repository ePrints Soton

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s. The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given e.g.

AUTHOR (year of submission) "Full thesis title", University of Southampton, name of the University School or Department, PhD Thesis, pagination

UNIVERSITY OF SOUTHAMPTON
FACULTY OF SOCIAL AND HUMAN SCIENCES
School of Social Sciences

**Public perceptions of development and
relationship with wellbeing: the case of Makueni
County in Kenya**

by

Hildah Minayo Essendi

Thesis for the degree of Doctor of Philosophy

August 2015

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF SOCIAL AND HUMAN SCIENCES

SCHOOL OF SOCIAL SCIENCES

Thesis for the degree of Doctor of Philosophy

**PUBLIC PERCEPTIONS OF DEVELOPMENT AND RELATIONSHIP
WITH WELLBEING: THE CASE OF MAKUENI COUNTY IN KENYA**

By Hildah Minayo Essendi

This thesis contains three papers which investigate three aspects of perceptions of development in a rural community in Makueni County of Eastern Kenya. The study uses a mix of qualitative and quantitative data collected in Kitonyoni and Mwanja sub-locations of the County between 2010 and 2012. The overarching argument in the three papers is the need for a shift in development approaches from a mere implementation, to a more participatory one that incorporates the opinions and actions of those that the development efforts are intended for. This study argues that development efforts not only need to continue incorporating the key traditional dimensions of development such as standards of living and income, but most importantly, these efforts need to also recognise the importance of non-monetary factors, particularly in understanding the dynamics of socio-economic development. This position is reinforced by the inequality in the endowment of natural and human resources, varying levels of development and wellbeing standards and specifically since most rural areas of the country and other countries in the region continue to lag behind.

Paper one (chapter 4) focuses on the perceptions of development using qualitative and quantitative data collected from the youth, adults and leaders from the two sub-locations. The paper sought to investigate how those responding in the study conceptualise development in their context and how they rank their development needs in order of priority, whilst also articulating possible strategies to address these needs. The study finds that definitions of, and strategies to address development are multidimensional, contextual and go beyond the monetary measures. The community also perceives poverty to be a major indicator of development, or lack of it. Using the conceptualization of development articulated in the first paper, paper two (chapter 5) looks at the socio-economic, demographic and wellbeing factors influencing these perceptions using a structural equation modeling approach. In this paper, a perception of development index is computed and modelled against socio-economic, demographic and perceived wellbeing factors. The paper finds gender, age, perceived household wellbeing and health behavioural factors, interpreted in this study as community socialization, to be significant influencers of perceptions of development by those responding in this study. Still using perceptions articulated in paper one, paper three (chapter 6) investigates whether perceptions of development influence wellbeing outcomes. A perception of participation in development index is computed and then modelled against fertility choices (contraceptive use and desired fertility). The paper finds that contraceptive use and desire for fewer children corresponds with perceptions of participatory development.

Following these findings, policy and programmatic implications for development are highlighted.

Table of Contents

ABSTRACT	i
Table of Contents	ii
List of tables	v
List of figures	vi
DECLARATION OF AUTHORSHIP	ix
Acknowledgements	xi
Definitions and Abbreviations	xii
1. INTRODUCTION	1
1.1 Background of the study.....	1
1.2 Rationale of the study.....	3
1.3 Aims and objectives of the thesis.....	10
1.4 Structure of the thesis.....	12
2. BACKGROUND TO STUDY: DEVELOPMENT INTO CONTEXT	15
2.1 The state of world development.....	15
2.2 Inequalities in development.....	17
2.3 Development and wellbeing inequalities in Kenya.....	21
2.4 Development efforts being undertaken in Kenya	28
2.5 Poor development progress in Makueni County/Makueni County profile	32
2.6 Theoretical frameworks in study of development.....	35
3 METHODOLOGY	49
3.6 Introduction.....	49
3.7 Geographical setting.....	49
3.8 Measurement of key concepts.....	58
3.8.1 Definition of development and perceptions of development.....	59
3.9 Study design	63
3.10 Study population	72
3.11 Methods of data collection.....	73
3.12 Key measurement concepts and variables	74
3.13 Methods of data analysis.....	74
4 PERCEPTIONS OF DEVELOPMENT BY RESIDENTS OF A RURAL COMMUNITY IN KENYA	81
4.6 Abstract.....	81
4.7 Introduction.....	81
4.8 Methods.....	84

4.9	Results	87
4.10	Discussion	121
4.11	Conclusion.....	126
5	WHAT FACTORS INFLUENCE PERCEPTION OF DEVELOPMENT IN RURAL KENYA? A STRUCTURAL EQUATION MODELING APPROACH.....	127
5.1	Abstract.....	127
5.2	Background	127
5.3	Theoretical approaches.....	128
5.4	Data and methods	137
5.5	Descriptive results.....	146
5.6	Discussion	152
5.7	Conclusion.....	155
6	DO PERCEPTIONS OF PARTICIPATION IN DEVELOPMENT INFLUENCE FERTILITY CHOICES? EVIDENCE FROM RURAL KENYA.....	159
6.1	Abstract.....	159
6.2	Introduction	160
6.3	Data and methods	166
6.4	Results	168
6.5	Discussions and conclusions	175
7	MAIN FINDINGS AND CONCLUSIONS	179
7.1.	Main findings	179
7.2.	Conclusion.....	183
7.3.	Limitations of the research	186
7.4.	Policy and programme implications	188
7.5.	Planned publication of research findings	191
7.6.	Areas for further research	192
	Appendices	193
	Appendix 1: Kenya ethical approval for the Replication of Rural Decentralised off-grid Electricity Generation through Technology and Business Innovation Project.....	193
	Appendix 2: University of Southampton ethical approval_ the Replication of Rural Decentralised off-grid Electricity Generation through Technology and Business Innovation Project.....	194
	Appendix 3: Ethical approval _University of Southampton	195
	Appendix 4: Research authorization	196
	Appendix 5: Research permit	197
	Appendix 6: Community leader key informant interview guide	197
	Appendix 7: Focus group discussion guide.....	202
	Appendix 8: Questionnaire for the survey on perceptions of development	208

Appendix 9: Household questionnaire for the Replication of Rural Decentralised off-grid Electricity Generation through Technology and Business Innovation Project	215
Appendix 10: Papers drafted from this study and either published or submitted to peer-referred journals.....	233
List of References	279

List of tables

TABLE 2.1: PERCENTAGE DISTRIBUTION OF MALNUTRITION BY PROVINCE AND BY PLACE OF RESIDENCE IN KENYA, KDHS 2008-9	23
TABLE 3.1: CHARACTERISTICS OF RESPONDENTS	69
TABLE 4.1: CHARACTERISTICS OF RESPONDENTS	86
TABLE 4.2: REPORTED IMPORTANT ASPECTS OF DEVELOPMENT BY GENDER (SOURCE: HOUSEHOLD SURVEY IN KITONYONI, 2012)	90
TABLE 4.3: GENDER DIFFERENTIALS IN PERCEPTIONS OF DEVELOPMENT AT PERSONAL, COMMUNITY AND NATIONAL LEVELS (SOURCE: HOUSEHOLD SURVEY IN KITONYONI, 2012)	95
TABLE 5.1: DEMOGRAPHIC AND HOUSEHOLD SOCIO-ECONOMIC CHARACTERISTICS OF SAMPLE	138
TABLE 5.2: ACRONYM DEFINITIONS OF VARIABLES IN THE MODEL.....	146
TABLE 5.3: PARAMETER ESTIMATES OF PERCEIVED DEVELOPMENT AND INDEPENDENT CHARACTERISTICS	147
TABLE 6.1: TOTAL VARIANCE OF PERCEPTION OF DEVELOPMENT INDEX EXPLAINED	168
TABLE 6.2: FACTOR LOADINGS AND COMMUNALITIES OF PERCEPTION OF DEVELOPMENT INDEX ...	169
TABLE 6.3: DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS (SOURCE: HOUSEHOLD SURVEY DATA, KITONYONI 2011 & 2012)	170
TABLE 6.4: RESULTS OF LOGISTIC REGRESSION ANALYSIS ON THE EFFECTS OF PERCEPTION OF DEVELOPMENT ON THE USE OF CONTRACEPTION (SOURCE: HOUSEHOLD SURVEY DATA, KITONYONI 2011 & 2012)	172
TABLE 6.5: RESULTS OF MULTINOMIAL LOGISTIC REGRESSION ANALYSIS ON THE EFFECTS OF PERCEPTION OF DEVELOPMENT ON DESIRED FERTILITY	174
TABLE 7.1: DEMOGRAPHIC, SOCIO-ECONOMIC AND HEALTH CHARACTERISTICS OF RESPONDENTS (18-54 YEARS)	267
TABLE 7.2: RESULTS OF MULTINOMIAL LOGISTIC REGRESSION ANALYSIS ON THE EFFECTS OF PERCEPTION OF DEVELOPMENT ON DESIRED FERTILITY	273

List of figures

FIGURE 1.1: KENYA'S GDP PER CAPITA IN USD	5
FIGURE 1.2: TRENDS IN KENYA'S HUMAN DEVELOPMENT INDEX (HDI), 1980-2013.....	6
FIGURE 2.1: TRENDS IN CONTRACEPTION USE BY MARRIED WOMEN (15-49) IN KENYA, KDHS 2008-924	
FIGURE 2.2: PERCENTAGE OF MARRIED WOMEN (15-49) IN KENYA USING CONTRACEPTION BY REGION, KDHS 2008-9.....	25
FIGURE 2.3: PERCENTAGE PROVINCIAL CONTRIBUTION TO NATIONAL POVERTY IN KENYA.....	27
FIGURE 2.4: PERCENTAGE DISTRIBUTION OF POVERTY IN 10 OF THE POOREST CONSTITUENCIES IN EASTERN PROVINCE.....	28
FIGURE 2.5: A SUMMARY OF THE MODIFIED SUSTAINABLE DEVELOPMENT APPROACH.....	41
FIGURE 2.6: THE THEORETICAL FRAMEWORK ADOPTED IN THE STUDY: A SUMMARY OF APPROACHES TO DEVELOPMENT	46
FIGURE 2.7: STUDY'S THEORETICAL FRAMEWORK: THE BEST APPROACHES TO DEVELOPMENT	47
FIGURE 3.1: MAP OF STUDY AREAS	56
FIGURE 3.2: MAP SHOWING STUDY AREAS AND NEARBY TOWNS.....	57
FIGURE 4.1: REPORTED IMPORTANT ASPECTS OF DEVELOPMENT AND THEIR RANKING (SOURCE: HOUSEHOLD SURVEY IN KITONYONI, 2012)	89
FIGURE 4.2: PERCEIVED IMPORTANT ASPECTS/FACTORS OF DEVELOPMENT AT PERSONAL, COMMUNITY AND NATIONAL LEVELS (SOURCE: HOUSEHOLD SURVEY IN KITONYONI, 2012)	92
FIGURE 4.3: AUTHOR'S SUMMARY OF RESPONDENTS' PERCEIVED IMPORTANCE OF ADEQUATE WATER SUPPLY AND ITS LINK WITH DEVELOPMENT AND POVERTY REDUCTION (SOURCE: QUALITATIVE DATA IN KITONYONI AND MWANIA, 2010)	96
FIGURE 4.4: AUTHOR'S SUMMARY OF RESPONDENTS' PERCEIVED IMPORTANCE OF ADEQUATE ELECTRICITY SUPPLY AND ITS LINK WITH DEVELOPMENT (SOURCE: QUALITATIVE DATA IN KITONYONI AND MWANIA, 2010).....	98
FIGURE 4.5: AUTHOR'S SUMMARY OF RESPONDENTS' PERCEIVED IMPORTANCE OF IMPROVED TRANSPORT AND ITS LINK TO DEVELOPMENT (SOURCE: QUALITATIVE DATA IN KITONYONI AND MWANIA, 2010)	99
FIGURE 4.6: AUTHOR'S SUMMARY LINKING POVERTY AND DEVELOPMENT INDICATORS IN MAKUENI	110
FIGURE 4.7: AUTHOR'S SUMMARY OF THE PERCEIVED INDICATORS OF POVERTY IN MAKUENI.....	111
FIGURE 4.8: PERCEPTION OF STRATEGIES THROUGH WHICH DEVELOPMENT CAN BEST BE ACHIEVED AT HOUSEHOLD, COMMUNITY AND NATIONAL LEVELS (SOURCE: AUTHOR'S HOUSEHOLD SURVEY DATA)	113
FIGURE 4.9: AUTHOR'S SUMMARY OF MAKUENI COMMUNITY PERCEPTIONS OF DEVELOPMENT.....	116
FIGURE 5.1: THE PORTER CONCEPTUAL MODEL OF FINANCIAL WELL-BEING	134
FIGURE 5.2: CONCEPTUAL MODEL OF PERCEIVED DEVELOPMENT.....	136

FIGURE 5.3: FITTED MODEL OF PERCEIVED DEVELOPMENT AND FACTORS INFLUENCING PERCEPTION OF DEVELOPMENT	145
FIGURE 5.4: DETERMINANTS OF PERCEPTIONS OF DEVELOPMENT	149
FIGURE 5.5: REVISED MODEL OF PERCEIVED DEVELOPMENT	152
FIGURE 6.1: POTENTIAL BENEFITS OF REDUCED FERTILITY ON DEVELOPMENT	164

DECLARATION OF AUTHORSHIP

I, **HILDAH MINAYO ESSENDI** declare that the thesis entitled **Public perceptions of development and relationship with wellbeing: the case of Makueni County in Kenya**

and the work presented in the thesis are both my own, and have been generated by me as a result of my original research.

I confirm that:

1. this work was done wholly or mainly while in candidature for a research degree at this university;
2. where any part of the thesis has previously been submitted for a degree or any other qualification at this university or any other institution, this has been clearly stated;
3. where I have consulted the published work of others, this is always clearly attributed;
4. where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. i have acknowledged the main sources of help;
6. where the thesis is based on work done by myself and jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. parts of this work have been published as follows:

7.1. Essendi, H., Nyovani, M. and Zoe, M. (2014). Perceptions of development by residents of a rural community in Kenya: A capability issue. *Journal of African Studies and Development*, 6(4), 67-77. DOI: 10.5897/JASD2014.0281

7.2. Essendi, H. and Nyovani, M. (2014). Factors influencing perception of development in rural Kenya: a structural equation modelling approach. *European Journal of Research in Social Sciences*, 2(4), ISSN 2056-5429

Signed:

Date:

Acknowledgements

I am truly grateful for all the people who made it possible for me to embark on my PhD and who have tremendously helped me during the entire period of my PhD. Although I may not be able to mention everyone who walked with me in this journey, I will nevertheless start by thanking those whose names do not appear in the list below but who hold a special place in my heart for playing a big role in helping me accomplish this task.

First I would like to especially thank my supervisor, Professor Nyovani Madise and my advisors Professor Zoe Matthews (who was also my supervisor during the first year of my PhD study), Dr. Gloria Langat and Dr. Fiifi Amoako-Johnson for guiding me during these past four years of my PhD study. I greatly appreciate your scientific advice, knowledge and many insightful discussions and suggestions. Special thanks to Nyovani for your marvellous support, guidance and for allowing me freedom to pursue various aspects of my research without objection.

I owe special thanks to the School of Social Sciences (Department of Social Statistics) and the Centre for Global Health, Population Poverty and Policy (GHP3) at the University of Southampton for financial support during my PhD study. I am also grateful to the Institute of Anthropology, Gender and African Studies (IAGAS) of the University of Nairobi for facilitating my fieldwork and giving me office space to conduct my study while in Kenya. I would specifically like to thank Professor Simiyu Wandibba for his mentorship during my PhD data collection. Most importantly, I wish to thank members of Mwanja and Kitonyoni sub-locations of Makueni County where this study took place. I am extremely grateful for your accepting to share your thoughts, views and knowledge with me.

This journey of completing a PhD wouldn't be possible without the support of friends and family. Many thanks to my dear friends and colleagues; Gloria, Fiifi, Carla, Rosella, Arek, Yordi and Jesman, for your immense support. I thank my siblings and my parents; to my dad, I finally earned the title (*Daktari*), my mum, this would never have been possible without your unwavering love and personal sacrifice to see us educated.

Definitions and Abbreviations

AIDS	Acquired Immunodeficiency Syndrome	KII	Key Informant Interview
ASAL	Arid and Semi-Arid Lands	KIPPRA	Kenya Institute for Public Policy Research
CBS	Central Bureau of Statistics	KNBS	Kenya National Bureau of Statistics
CDF	Constituency Development Fund	LATF	Local Authority Transfer Fund
CFA	Confirmatory Factor Analysis	LVPA	Latent Variable Path Analysis
CFI	Comparative Fit Index	MDG	Millennium Development Goal
FAO	Food and Agricultural Organization	NCAPD	National Coordinating Agency for Population and Development
FGD	Focus Group Discussion	OR	Odds Ratio
GAD	Gender and Development	PRB	Population Reference Bureau
GDP	Gross Domestic Product	PRSP	Poverty Reduction Strategy Paper
GHP3	Centre for Global Health, Population, Poverty & Policy	RMSEA	Root Mean Squared Error of Approximation
GNI	Gross National Income	ROSCA	Rotating Credit Association
GOK	Government of Kenya	SEM	Structural Equation Modeling
HDI	Human Development Index	UN	United Nations
HIV	Human Immunodeficiency Virus	UN	United Nations
IAGAS	Institute of Anthropology Gender and African Studies	UNDP	United Nations Development Programme
IFI	Increment Fit Index	UNICEF	United Nations Children's Fund
IMF	International Monetary Fund	USD	United States Dollar
KDHS	Kenya Demographic and Health Survey	WHO	World Health Organization
KES/KSH	Kenyan Shilling	WID	Women in Development

1. INTRODUCTION

1.1 Background of the study

In this section, a review of the approaches to development that have potential to ensure sustainable growth is presented. The specific focus is on the arguments towards a participatory approach to development, highlighting its usefulness in ensuring sustainable development. Development as used in this study is defined as the process of enlarging people's choices thereby enabling them lead long and healthier lives, acquire knowledge and enjoy a decent standard of living while also contributing to political decision-making (United Nations Development Program, 2010c). Participatory development on the other hand is defined as an approach to development where the capacity of the socially and economically marginalised is improved and their decisions sought in regards to development efforts undertaken (Guijt & Shah, 1998; Chambers, 2005; Sen, 1999).

The key factors singled out, in neo-classical approaches, as being key in development are the standard of living and income (Szirmai, 2005). Todaro and Smith summarise some of the traditional economic definitions of development focusing on incomes for instance entailing *“the capacity of a national economy, whose initial economic condition has been more or less static for a long time, to generate and sustain an annual increase in its Gross National Income (GNI) at rates of 5% to 7% or more”* (Todaro & Smith, 2006, p. 15). Other traditional indicators of development have focused on the ability for nations to expand their output at a rate faster than the growth rates of their populations, otherwise known as income per capita as well as the alternation of modes of production and employment, for instance from agriculture to rapid industrialisation (Todaro & Smith, 2006). These economic approaches are important as they are used to evaluate the progress of development.

In recent development studies however, it has become increasingly important to also recognise the importance of non-monetary factors, particularly in understanding the dynamics of socio-economic development (Ledwith, 1997; Ray, 1998; Sen, 1999, 2010; Todaro & Smith, 2006). Amartya Sen for instance, regards development as more than just the increase in incomes. Rather he refers to development as the removal of unfreedoms that leave people with little choice and little opportunity of exercising their reasoned agency and regards income as not the end of development, rather a means to development (Sen, 1999,

2010). To Sen, income is only a means to reduce poverty and not the end of it, and that enhancing people's capabilities is most important as this reflects what people are able to do (Sen, 1999). Szirmai (2005), on the other hand posits that, the concept of development cannot only be explained by changes in economic terms, rather by a combination of changes in economic indicators and other socio-economic factors (Szirmai, 2005). Debraj Ray also advances the argument that development goes beyond income - although acknowledges income as an important indicator - rather that it is also the removal of the unfreedoms preventing the enjoyment of life, such as poverty, undernutrition, low life expectancy, poor access to sanitation, lack of clean drinking water, poor health services, high rates of infant mortality, poor access to knowledge and schooling and low literacy levels, among other factors (Ray, 1998). Todaro and Smith (2006) add to the voice of viewing development as a phenomenon that is better understood by viewing it as more than an increase in incomes. They hence emphasize the importance of approaching development as a multidimensional process involving major changes in social structures, popular attitudes and national institutions as well as the acceleration of economic growth, the reduction of inequality and eradication of poverty (Todaro & Smith, 2006). Other scholars contributing to the study of development and to new approaches to the study and measurement of development are Peet and Hartwick (2009) who simply define it as making a better life for everyone, including meeting their basic needs, ensuring everyone has enough food to lead healthy lives, having a safe and healthy place to live, affordable services for everyone and being treated with dignity and respect (Peet & Hartwick, 2009).

Viewing development through the study of both economic and non-economic indicators is therefore an approach that has been advocated for, and in some instances adopted by various scholars and development agencies. In its work, helping to build nations that can withstand crisis and drive and sustain growth that has potential to improve the quality of life, the United Nations Development Fund (UNDP) adopts a definition of development that is both multidimensional in nature and seeks to improve peoples' capabilities. Its definition of development, which is also used in this study views development as a process of enlarging people's choices with the most critical choices entailing a long and healthy life, acquiring knowledge and enjoying a decent standard of living and outlines the other choices to include political freedom, guarantee of human rights and self-respect (United Nations Development Program, 2010c). The World Bank on the other hand emphasizes the aspect of inclusion of growth, that is reduction in disparities within and across countries as important in ensuring

equitable development (Ray, 1998). With these emerging voices in the study of development and its economics therefore, there has been the incorporation of both economic and non-economic measures in development assessments. The Human Development Report of the Programme for instance, specifically defines human development as entailing much more than the rise or fall of national incomes, with economic growth being viewed as only the means to development. The agency defines development as the expansion of people's choices to lead lives that they value (United Nations Development Program, 2010c). This multidimensionality is further incorporated in the programmes' assessment of human development, as defined and promoted by the United Nations Development Fund as in the case of the Human Development Index (HDI). HDI, a composite statistic is computed using the life expectancy, education, and income indices, and which is used to rank countries in terms of their human development (UNDP, 2014).

1.2 Rationale of the study

Despite the recognition and the incorporation of these additional factors in development assessments, various indicators regarding development, both economic and non-economic especially on wellbeing and health, in developing countries remain below average (United Nations, 2011a; World Bank, 2010b). This situation abounds in spite of the implementation of many development initiatives in these countries, particularly in the rural areas. Many rural areas of the developing world still lag behind in development, as they continue to grapple with various challenges, around the areas of health, education and wellbeing (Black, Morris, & Bryce, 2003; Falkingham, 2000; Fotso, 2007; Sahn & Stifel, 2003). The rural poor are reported to be generally undereducated and to have limited access to health care, adequate sanitation and gas and electricity supplies (Sahn & Stifel, 2003). Some studies have also revealed that children in rural areas have worse health outcomes than their urban counterparts, as a result of poverty and poor accessibility to properly-equipped health facilities (Fotso, 2007; Sastry, 1997; So, 1990).

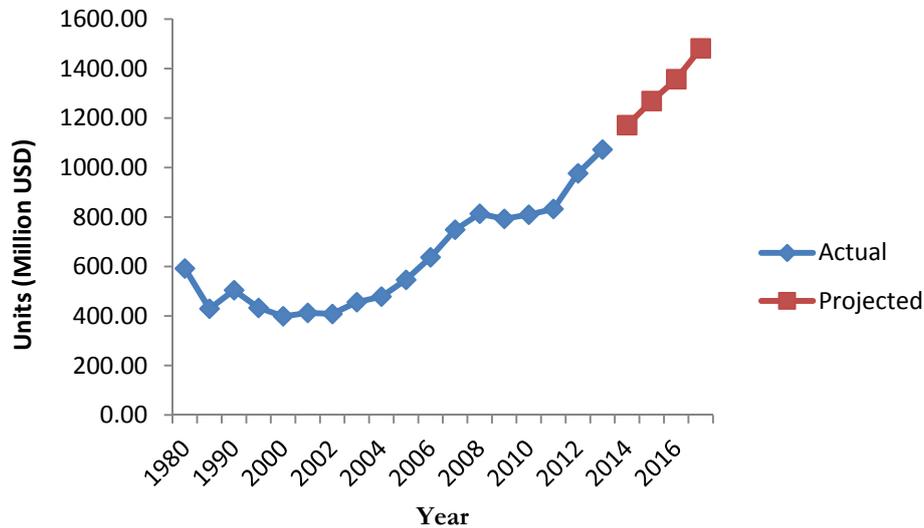
Globally, although there has been progress in improvement of wellbeing, rural areas of developing countries lag behind in reduction in poverty, hunger, illiteracy and disease (United Nations, 2011a). Overall, the situation of millions of people worldwide has improved due to various efforts at the global, regional, national and local levels. Consequently, there has been some progress in the improvement of health. For instance, there has been an improvement

in child and maternal health and a reduced loss of lives from HIV, malaria and tuberculosis (United Nations, 2014). Despite this progress, there are still some inequalities in the areas of wellbeing. Sub-Saharan Africa for instance, still experiences widespread poverty and poor wellbeing, with its rural areas being worse off (World Bank, 2010b). Although there has been a marginal improvement in various aspects of wellbeing, globally, this improvement has been both at a reduced level in the region, and also unequal. For instance, while the population using an improved water source between 1990 and 2008 had improved from 71% to 84%, the sub-Saharan Africa region's improvement remained low (improving from 49% to 60%), with rural areas lagging behind urban areas, at 47% and 83% respectively (World Bank, 2010b). Despite general improvement in meeting the MDGs, other wellbeing indicators remain below average among the poorest indicating that there is need to pay special attention to the poor, most of who reside in the rural areas (United Nations, 2011a).

Kenya, like many countries in the region faces dire conditions on development and wellbeing, particularly among its rural populace. The country's development prospects as demonstrated by the economic indicators of growth, shows that the country's development progress stagnated from 1980 and only started to improve from 2003 (Figure 1.1). There has however been a recent overhaul of its data, taking into account the expanding industries such as mobile phone money transfer and other informal businesses, thereby increasing the size of its gross domestic product from \$44.1 billion in 2013 to \$55.2 billion in 2014 (KNBS, 2014). Although this has in effect pushed the country to a lower-middle income economy status, it still grapples with various challenges, including unequal development, poverty and poor indicators in some aspects of wellbeing. Although the country's GDP is projected to improve further, poverty levels in the country remain high, and rural areas are worst affected, both by poverty and in the development disparities. Yet it has been argued that both economic development and the equal distribution of wealth are paramount in the development of a country (Ray, 1998). While the World Bank advocates for equitable development progress and reduction in the disparities across and within countries (Kagia, 2005), the situation in Kenya still portrays huge inequalities, particularly between the rural and urban parts of the country and between the various regions of the country (Central Bureau of Statistics, 2009; World Bank, 2009). Some regions of the country have fared better, while others lag behind in various indicators of wellbeing, including health and education (Onsomu, Nzomo, & Obiero, 2005; Republic of Kenya, 2011a, 2011c, 2011d). Poverty levels and distribution of

resources also vary by region and area of location with some regions experiencing as much as four times the level of poverty in other regions (World Bank, 2009).

Figure 1.1: Kenya's GDP per capita in USD

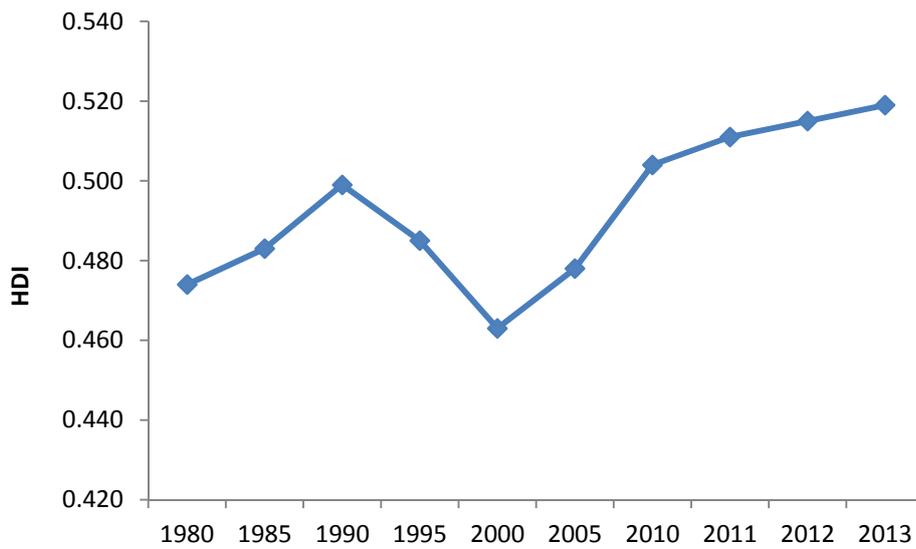


Source: (IMF, World Economic Outlook 2013)

Consequently, the country's human development has been inconsistent, steadily rising from 1980 till 1990, when the progress began to reverse, dipping further in 2000, but which began to rise again (Figure 1.2). Progress in the improvement of wellbeing in the country has also been slow (Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], & ORC Macro, 2004; Kiringai & Levin, 2008; World Bank, 2009). In addition, overall, development in the country has been unequal. While the World Bank gives the poverty estimates at the macro-level, the Kenya Central Bureau of Statistic breaks down the poverty estimates regionally and by constituency. It estimates that in Eastern province, 42% of the poor are concentrated in 10 of the 36 constituencies, which are Makueni, Nithi, Kitui Central, Mbooni, Kangundo, Kibwezi, Igembe, Mwingi North, Mwala and Machakos Town (CBS, World Bank, SIDA, & SID, 2005). Further, within this region, Makueni constituency is considered to be poorest (73.5% of households in the constituency are poor) (National Coordinating Agency for Population and Development, 2005). A similar pattern can be observed in Coast province, where poverty incidence in the poorest constituency (Ganze) is almost 3 times that of the least poor one (Bura constituency). These patterns of poverty are

mirrored by the poor health indicators in these areas, where disparities have been reported. The percentage of women delivering in health facilities for instance was 17.3% in North Eastern, 42.8% in Eastern and 73% in Central province (KNBS & ICF Macro, 2010). Percentage of severely stunted children on the other hand also varies from 17.7% in North Eastern, 17.1% in Eastern and 9.4 in Central province (KNBS & ICF Macro, 2010).

Figure 1.2: Trends in Kenya's Human Development Index (HDI), 1980-2013



Source: Human Development Reports (UNFPA, 2013b)

Some of these inequalities persist despite Kenya recording some improvement in its GDP, a situation that could however be explained by some of the inequality hypotheses that argue that when a country is developing, for instance with increase in a country's GDP, the benefits to individuals may take longer, such that this may not immediately translate into improvement in individuals' welfare and growth and that this development is often accompanied by inequalities, until it reaches a stable level (Kuznets, 1955). Investigating the long-term changes in the personal distribution of income, Kuznets (1955) articulates that a country's increase in its GDP might not necessarily translate into immediate equitable development for all, rather, that, only a few members may initially benefit from this development, which equalizes later, with sustained economic growth and improvement of the GDP (Kuznets, 1955). According to Kuznets's hypothesis, there occurs a natural cycle of economic inequality which in most cases is driven by market forces, causing inequality initially, which later reduces. Despite this, efforts to try and reduce this gap, while ensuring

that economic gains are enjoyed by everyone, need to be implemented. Efforts to ensure that economic and development gains that can be felt by everyone however, need to be accompanied by other measures and changes as was implemented in some Asian countries. As such countries as Japan, South Korea, Taiwan, South Korea and Hong Kong experienced rapid increases in the growth of their economies, there were also concerted efforts to ensure this growth was uniformly distributed. Some of the approaches undertaken to ensure this were immediate re-investment of the initial benefits in such sectors as agriculture, education and the industries (Stiglitz, 1996). One of the priority issues to check is ensuring that the country's population growth is controlled. This is because the two have been found to influence each other (Thuku, Gachanja, & Obere, 2013), and efforts to increase the gain of economic growth would succeed if population growth was also controlled, as high population impacts economic development due to such challenges as food inadequacy, adequate infrastructure and reduction in savings per capita among other issues (United Nations Population Fund, 2013).

There is therefore need to ensure that Kenya's economic and population growth rates match each other. A comparison of the country's GDP and population growth rates indicate that controlling the country's population is an urgent matter, if any gains in its economic development is to be felt by all. In the last 15 years, Kenya's population has been growing at 2.7% annually, and although this is a reduction from the 3.4% annual rate in the early 1990's, this is still unsustainable, especially since its GDP has not been growing at a rate to match this population increase (World Bank, 2015). Controlling Kenya's population growth, while at the same time increasing development efforts is even more important as the country aspires to achieve the Kenya Vision 2030, that seeks to drive the country to a middle-income status by 2030, by ensuring that it maintains a growth rate of 10% per annum over the next quarter of a century (Republic of Kenya, 2007a). To achieve this vision, there is need to also make progress in other areas that put a strain to its economy, for instance by ensuring that there is a decline in its population growth. There has indeed been progress on this front, whereby Kenya's population growth rate reduced from 3.8% per annum in the early 1980s to about 2.6% per annum (The World Bank, 2014b). This current growth rate however still reflects one of the highest in the world since this implies that Kenya has a very young population which puts a strain to its economy and resources, contributing to a high poverty incidence (Yin & Kent, 2008). Kenya has more than 40% of its population being aged below 15 years (Haub, 2007). Addressing population growth is therefore as vital to the country's

development as such factors as technological advancement. This is because a very young population and high population growth rate can put an unsustainable pressure on the country's economy and resources (United Nations, 2013b). Checking the country's population growth rate is therefore important as efforts to advance its development progress are implemented, also has potential to ensure that the population is healthy enough to be able to fully participate in development while reducing the pressure on the economy for instance through a burden of disease (Adam, Collier, & Ndung'u, 2010).

These inequalities in development, poverty and wellbeing in the country persist despite various efforts to address them. These efforts, although well-meaning, have failed to adequately address development and wellbeing needs due to poor prioritization of these initiatives, rigid government budgetary procedures and incomplete decentralization of the approaches used (Czaja & Blair, 1996; Mukui, 2005). Despite government attempts to incorporate participatory approaches in development efforts in the country, these attempts have been incomplete, being mainly planned from a central point. Resources have traditionally been distributed through government line ministries, to districts and communities to go towards such development initiatives as education, health care and protection of the vulnerable (the poor). Although the Kenyan government has employed participatory approaches such as, in the development of poverty maps using qualitative information generated from beneficiary communities and in the Poverty Reduction Strategy Papers, these efforts amounted to incomplete-participation (Czaja & Blair, 1996; IMF, 2011). These attempts have failed to achieve this desired effect as there has been minimal involvement of the beneficiary communities, an omission that has contributed to the poor identification/prioritization of development initiatives (Czaja & Blair, 1996; Mukui, 2005). The other efforts the Kenyan government has engaged in are in regards to the use of various decentralised approaches, including the constituency development fund and the district development committees (Republic of Kenya, 1999, 2002), where the central government allocates funds for development activities through constituencies (Republic of Kenya, 2008a). Despite these efforts, poverty, poor development and poor wellbeing outcomes still abound, especially for the country's rural population (Republic of Kenya, 2011a, 2011c). The most recent attempts at decentralised development is through the new devolution governance which began in March 2013 (The World Bank, 2014a). It is however premature to make any assessment of the benefits of these new structures, although these new approaches promise to implement development projects that reflect the needs of

communities at the county level (Akech, 2010). Employing decentralised approaches and participatory development in the country has potential to drive faster and equitable development because Kenya faces differences in the geography and resource-availability regionally indicating that this approach could provide focused-development, as previous approaches have not been effective in ensuring equitable development since development has continued to elude the rural poor in the country. Consequently, Kenya was ranked 147th out of 187 countries worldwide in the United Nations Development Program's 2013 human development index (UNFPA, 2013b). The human development report gives the country's human development index at 0.535, which although is a constant improvement, these changes are quite modest. In addition, other development assessments show a country where more effort is still needed; life expectancy at birth in 2013 was 61.72 years, the mean years of schooling was given as 6.27 years while the percentage of people in multidimensional poverty was 48.19% in 2013 (UNFPA, 2013b).

It is obvious therefore, that since independence, the Kenyan government and its development partners have made development and the improvement of well-being an important agenda. However, few of the government and other development partners' initiatives have incorporated full participatory development methodology where the views of recipient communities regarding important aspects and outcomes of their development are sought. Even fewer initiatives have incorporated this approach in development targeting the rural poor in the country. This is despite increased emphasis on the need to shift the approach to development towards incorporating more community approaches, especially at the stage of planning for development projects (Chambers, 1983; Green, 2008; Okafor, 1982; Sen, 1999). These approaches are also in complete disregard of research findings indicating the existence of clear dynamics even between regions in the same country, as is the case of Kenya, evidence that reinforces the importance of approaching each group as a separate entity in development efforts (Alwy & Schech, 2007; IFAD, 2010; Muhula, 2009).

Participatory development is one of the approaches that has potential to help achieve faster and equitable development outcomes. This is because it enables the enlargement of the capacity of communities and empower them to participate in decisions regarding development in their contexts has potential in ensuring that the initiated projects reflect the needs, desires, resources and expertise of the beneficiary communities (Chambers, 1983, 2005), thereby achieving quicker and sustainable results. This approach is especially

important in a country like Kenya which continues to experience development inequalities either between the rural and urban areas of the country or regionally, and where the different regions have unique resources, indicating that approaching each region/area of the country separately, could improve development outcomes in the country. This approach to development has the potential to both reduce development inequalities and to ensure projects initiated reflect the expectations of community members thereby quickening sustainable development and improvement of wellbeing. One approach of capturing people's expectations of development is the understanding of their perceptions of development in their context and involving them in designing development strategies that are geared towards directly addressing their felt needs. People/communities will perceive what matters to them according to their immediate felt needs, culture, context, history and past experiences. Further, ranking of people's needs is important for development initiatives because this technique has potential to address the needs of beneficiary communities in order of priority.

This research intends to highlight the importance of community perceptions of development and their perception of participation in development, thereby enabling stakeholders in development to re-focus their approach to development. Adopting UNDP's definition, this study defines development as the progressive act of making a better life for everyone, by meeting their basic needs, ensuring everyone has enough food to lead healthy lives, having a safe and healthy place to live, ensuring that everyone has affordable services and ensuring that everyone is treated with dignity and respect (United Nations Development Program, 2010c). The study seeks to understand how people in Makueni County define development at the personal/household, community and national levels and how they rank their needs in order of priority. The study goes further to understand whether perceptions vary by personal and demographic characteristics and how these perceptions influence wellbeing outcomes.

1.3 Aims and objectives of the thesis

In an effort to foster development and improve wellbeing in the country, the government of Kenya has therefore designed and implemented many development and poverty alleviation projects. There have been specific decentralised development initiatives as well as initiatives employing participatory approaches. These include planning and implementing initiatives through government line ministries as well as through the constituency development

programme and the local authority transfer funds. In addition, the government has sought to involve the public in understanding and designing poverty and development initiatives through the Medium Term Expenditure Framework/Poverty Reduction Strategy Paper (MTEF/PRSP) (Republic of Kenya, 1999). These efforts have been targeted at advancing the various development issues such as reduction in poverty and inequalities, improvement in incomes and meeting of the millennium development goals. With this recognition, the government has been designing and implementing pro-poor and targeted policies to improve the well-being of the poor and the vulnerable (CBS et al., 2005). The government has also increasingly mainstreamed MDG goals in their project plans and interventions. Despite all these initiatives, most of the efforts have not borne much results, because of the limited involvement of development beneficiaries in these initiatives. The country still grapples with development inequalities, inconsistent economic growth and poor outcomes in human development. These challenges point to the need to revisit the development approaches currently being used in the country with the aim of adopting those that may help achieve sustainable development.

The main objective of this study is to understand the perspectives of community members on the key dimensions of development, and the relationship of their perceptions of development with some aspects of wellbeing.

Specifically, the study investigates:

1. A rural community's understanding of development and the dimensions of development that are perceived to be important to them at personal/household, community and national levels.
2. The socio-economic, socio-demographic and wellbeing factors influencing perceptions of development
3. The relationship between perceptions of development and select wellbeing outcomes, specifically fertility choices (contraception and desired fertility)

Research questions

1. How do residents of a rural community understand "development"? What are the various aspects of development that are perceived to be important to them, at personal/household, community and national levels?

2. What socio-economic, socio-demographic and wellbeing factors influence the perceptions of development?
3. Are perceptions of development associated with wellbeing outcomes fertility choices (contraceptive use and desired fertility)?

This study was guided by the assumption that perceptions of development have a relationship with socio-economic, socio-demographic and wellbeing of people in Makueni County.

It was conducted in Kitonyoni and Mwanja sub locations of Makueni County in Eastern Kenya.

1.4 Structure of the thesis

This thesis is divided into 8 main chapters. Chapter 1 gives the background of the study by briefly outlining the key arguments for conducting the study. It also articulates the rationale of the study, the study's objectives, research questions and assumptions and the structure of the thesis. Chapter two reviews existing literature around development with focus being centred around development at the global level and narrowing down to the sub-Saharan region, on the Kenyan context and going further to look at development in Makueni County where this study was conducted. This review highlights the state of development and wellbeing in the country, including the existing inequalities in development. The chapter further focuses on the development approaches employed in the country, narrowing down to the use of participatory approaches. Using Makueni County to showcase the state of development, literature on the development progress is reviewed and presented. A review of development theories is done and those most suitable for the study selected. These include the sustainable development approach, Amartya Sen's Capability Approach and the gender and development approaches and the conceptual framework highlighting the best approaches for sustainable development.

Chapter three documents the methodology used in the thesis. It presents information on the geographical setting of the study area, the study design, the study population, methods of data collection, the data collected and the data analysis methods used. The methodology used in the thesis; the mixed-methods approach is articulated. In addition, the researcher presents

the areas of focus of the research, which is investigation of community perspectives of development, perceptions of participation in development and the relationship with some select wellbeing outcomes. The sampling strategy used and the sample as well as the data collection plan employed is also presented in this section. The type of data used in the thesis, which is a mix of qualitative and quantitative data, and the analytical approaches employed are also presented. This section also gives a background of the Akamba-speaking people, who inhabit Makueni County.

Chapter four focuses on the first paper of the thesis which explores the perceptions of development by residents of Kitonyoni and Mwanja sub-locations. The paper uses qualitative data where the youth, adults and community leaders were interviewed in focus group discussions and key informant interviews regarding their understanding of development. The goal is to understand the community's view of their development needs and the best approaches to address these needs. The paper uses thematic analytical approach where the main themes emerging from the narratives are summarised and presented. The main findings of this paper as well as discussions, conclusions and recommendations for policy implications are given in the paper. The paper which answers research question number one is published in the *Journal of African Studies and Development* (Essendi, Madise, & Matthews, 2014). The published paper is also included in this thesis (Appendix 10).

Chapter five investigates the factors influencing the perceptions of development. This paper uses the structural equation modeling approach because the perception of development variable is latent, since it is not directly observable, rather it is computed using a number of observed variables which were measured at the time of data collection. The outcome variable, perception of development index, is modelled against age, gender, education, household wealth, parity and two health behavioural factors which are, alcohol use and smoking. The main findings of this analysis are also presented. In addition, the paper presents the main conclusions arising from these findings and the study's limitations and suggestions for future research are indicated. The paper generated from this chapter is undergoing peer-review in the *Development in Practice* journal. This chapter answers research question number two.

Chapter six assesses whether perceptions of participation in development is associated with better wellbeing, specifically fertility choices. This chapter's objective was informed by the realization that despite some progress in economic development in Kenya, the health situation especially for the rural poor in the country in many instances continues to fare

worse than that of the urban residents. The fertility situation also continues to show poor progress in rural Kenya despite evidence indicating that reduced fertility has potential to improve development in many of the developing countries experiencing uncontrolled population growth. Growing evidence shows that fertility reduction for rural Kenya continues to show slow improvement, yet its impact on the country's development is unprecedented. The paper employs logistic regression and multinomial logistic regression in the analyses and seeks to answer research question number 3. The results of the analysis indicate that the odds of using a method of contraception and desiring to have fewer children corresponds with holding perceptions of participatory development. The paper generated from this chapter is undergoing a second peer-review in PLOS ONE journal. The submitted paper is included in this thesis (Appendix 10).

Chapter seven presents an overall summary and conclusions of the thesis, highlighting the study's main findings and conclusions, limitations of the study, the policy and programmatic implications of the study, areas where further research could focus on and planned publication of the findings of the study.

2. BACKGROUND TO STUDY: DEVELOPMENT INTO CONTEXT

2.1 The state of world development

Although there has been significant progress in development at the global level within the last decade, some inequalities on the regional front and between urban and rural areas have been reported (United Nations, 2011a; United Nations Development Program, 2010a; World Bank, 2000, 2010b). Development in this context can be taken to mean economic progress, improvement in per capita income, reduction in inequalities, improvement in human development and achievement of the millennium development goals. An assessment of the progress of the Millennium Development Goals (MDGs) for instance indicates that there has been a general improvement in the MDG indicators, with the greatest progress being reported in education and health (United Nations, 2011a). MDGs, which refer to a development initiative encompassing 8 goals (including eradicating extreme poverty, reducing child mortality rates, fighting such epidemics like HIV/AIDS etc.) that 193 United Nations member states and 23 international organizations agreed to achieve by 2015, have recorded the greatest progress on child mortality, from 12.4 million in 1990 to 8.1 million in 2009 due to improvement in vaccination coverage and averting measles deaths (United Nations, 2011a). There has also been a reduction in malaria and tuberculosis incidences as well as in the number of people getting infected with HIV and also (an increase) in the number of those receiving HIV treatment, thereby reducing the number of AIDS-related deaths by 19 per cent by the 2009. The improvement in new HIV infections has been greater in sub-Saharan Africa (United Nations, 2011a).

Despite these improvements, some pockets of the world's population are still yet to experience the benefits of international efforts and technological advancement geared towards aiding development and improving the quality of life. By 2010, a quarter of humanity still lived on less than \$1.25 a day (World Bank, 2010b). In addition, one billion people lacked clean drinking water; 1.6 billion lacked electricity; 3 billion lacked adequate sanitation, while a quarter of all children in developing countries were malnourished (World Bank, 2010b). Further, although the increased efforts on development were reported to have made a positive impact on indicators of well-being by 2011, these indicators remain below average

among the poorest (United Nations, 2011a). Worse still, these indicators are expected to worsen, such that despite the United Nations predicting 15% fall in global poverty by 2015, this mainly reflects results from rapid growth in Eastern Asia, especially China and less progress in two of the poorest regions, including South Asia and sub-Saharan Africa (United Nations, 2011a). Sub-Saharan Africa fares worse where improvement in wellbeing evaluated against the MDG deadlines shows the region lagging behind other regions in these outcomes.

The rural areas of the region fare even worse. For instance, although sub-Saharan Africa nearly doubled the number of people using an improved drinking water source, from 252 million in 1990 to 492 million in 2008, this progress was greater in urban areas, compared to the rural areas of the region (United Nations, 2011a). Consequently, an urban dweller in sub-Saharan Africa is 1.8 times more likely to have access to an improved water source than a counterpart in the rural area (United Nations, 2011a). The improvements, favouring the urban areas, have also been reported in other areas of wellbeing. Reports of child malnutrition indicate that the rural population is worst affected, with children in rural areas of developing regions being twice as likely to be underweight as their urban counterparts (United Nations, 2011a). In comparison to the urban and the non-poor, less progress in sanitation has been registered among the poor and those in the rural areas (World Bank, 2010b). Food shortages are also a major problem during years of drought, and nutritional intake in rural areas of sub-Saharan Africa is consistently poor (Maxwell, 2001).

In addition, inequalities in development between regions, countries and between rural and urban areas continue to be registered. The Gini coefficient, a measure of how much the distribution of income or consumption among individuals or households within an economy deviates from a perfectly equal distribution indicates that there exist high inequalities in countries in sub-Saharan Africa compared to countries in other regions of the world (World Bank, 2014). Many countries in the region are ranked as having the lowest human development, as assessed by the human development index (UNDP, 2014). Another important measure of development, GDP per capita, which gives a country's value of goods and services divided by its average mid-year population, ranks many countries in sub-Saharan Africa and South Asia lowest (World Bank, 2014). All the indicators of development ultimately have an impact on the wellbeing of those residing in the affected countries. The regions and countries showing the least progress with these measures of development for instance also have high poverty levels, indicating the need to make more effort in ensuring

that there is both equitable and sustainable development across the globe, which would ultimately ensure a general improvement of wellbeing. This would help curtail the cyclical nature of poverty and underdevelopment whereby, the conditions of poverty, presence of diseases and inadequate human capital have been found to contribute to an increased state of underdevelopment. Underdevelopment on the other hand is reported to exacerbate the situation of poverty, disease, and generally poor development indicators in populations that are already poorly affected. An example of the seriousness of this condition relates to the over 22,000 children who die every day around the world with some of the major contributing factors being poverty, easily preventable diseases and illnesses (Shah, 2010; UNICEF, 2009; United Nations, 2011a). More efforts are needed in order to ensure that while overall improvements in the various development indicators around the world are made, the benefits are felt by all of the world's population, particularly those residing in rural areas of developing countries.

2.2 Inequalities in development

A review of the main indicators of development, including inequalities in some aspects of wellbeing is undertaken in this section. As this research focuses on such development outcomes as development inequalities, achievement of millennium development goals and poverty, this section highlights these indicators and their distribution in the various regions, including the differences between the rural and urban areas. The specific indicators of wellbeing under focus in this section include malnutrition, contraception and electricity, due to their importance in development progress. Contraception and fertility control for instance, is one of the ways to control population growth, which ultimately impact the achievement of the MDGs and overall development (UNDP, 2005). Electricity on the other hand has been found to be important in socio-economic development, specifically, through its contribution in creating opportunities for growth, as well as in expanding business opportunities (World Bank, 2001). Adequate nutrition for children within their first 1000 days of life is also as important for a country's development as it impacts both their current and future health, burden of health, cognitive development and therefore performance in school and consequently, the economy (Levinson & Basset, 2007).

Although there has been significant progress in development at the global level within the last decade, there still exist inequalities on the regional front and between urban and rural

areas (United Nations, 2010; United Nations, 2011; United Nations, 2014 World Bank, 2010). Disparities in the distribution of income assets, development outcomes and wellbeing between the rich and the poor, and between those residing in rural and urban areas around the world have necessitated an implementation of efforts aimed at bridging these gaps. Inequalities can be observed among regions and within regions. The Gini coefficient, a measure commonly used to show inequality between and within countries for instance shows the existence of huge inequalities between regions and within regions, with sub-Saharan Africa not only showing the most inequality as a region, but also displaying the existence of high inequalities within the individual countries (World Bank, 2014). In addition, development, reflected by the achievement of the Millennium Development Goals (MDGs) shows that there has been progress, however, some pockets of the world's population are still yet to experience this progress (United Nations, 2014). While significant progress in the achievement of MDG goals has been recorded worldwide, some regions and countries still fare far worse (United Nations, 2014). These development indicators are expected to worsen among the poorest such that, although global poverty is expected to fall by 15% between 1990 and 2015, this mainly reflects results from rapid growth in Eastern Asia, especially China and less progress in two of the poorest regions; South Asia and sub-Saharan Africa (United Nations, 2011).

Most of these disparities are registered between the rich and the poor and between those residing in rural and urban areas around the world, causing them to lag behind in development (Feachem, 2000; S. Sastry, 2004). These countries and communities lagging behind in development experience various challenges related to political, social, health, education, poverty and general wellbeing. Some of these include shorter life expectancies, higher disease rates, infant mortality, obesity, teenage pregnancies, political instability, emotional depression and high prison population which correlates with higher socioeconomic inequalities (Nel, 2003; Wilkinson & Pickett, 2009; World Bank, 2009). These conditions have been found to have a huge impact on the individuals, communities and countries that experience them. Poor health for instance hinders human capital, thereby creating and perpetuating a vicious circle of poverty and poor health outcomes (ACC/SCN, 1997; Haddad, Ruel, & Garrett, 1999). General development inequalities also exacerbate relative poverty and its impacts because those trapped in it are in most cases unable to meet basic needs such as food, shelter, clothing, access to clean water, sanitation facilities,

education and information (World Bank, 2009). While the poorest regions of the world are lagging behind in the various indicators of wellbeing, the between individual inequalities highlight the characteristics of individuals caught in this web (United Nations, 2011a; United Nations Development Program, 2010a). These include being disadvantaged on the basis of sex, age, ethnicity, region or disability with residents of rural areas being worst affected and encountering widening disparities in comparison with urban areas in some wellbeing outcomes (Alwy & Schech, 2007; Black et al., 2003; Caldwell & Caldwell, 1993; Falkingham, 2000; Fotso, 2006; Fotso, 2007; Madise, Matthews, & Margetts, 1999; Magadi, Madise, & Diamond, 2001; Sen, 2008; United Nations, 2011a). Those living in rural areas are worst affected, having the least progress in health, water and sanitation and general development. The presence of these inequalities therefore demands that recognition be given to the dynamism in development between regions as the various regions of the world follow different development patterns (Gereffi & Fonda, 1992).

Sub-Saharan Africa follows a different pathway to development, one that has seen it consistently display poor development outcomes and development inequalities. Despite years of development support, most indicators of wellbeing are still poor. The region has also been experiencing increasing poverty levels over the years and poor health outcomes. Whereas the other regions have encountered an improvement in human development, including life expectancy, sub-Saharan Africa has, in the past decade experienced a decline in life expectancy arising from the HIV/AIDS pandemic whose impacts have been most felt in the region than in any other region (USAID, 2011). In addition, the development inequalities between urban and rural areas of the region as well as between regions has also been well documented, with the poor experiencing worse conditions (Bocquier, Madise, & Zulu, 2011; Fotso, 2006; Fotso, 2007; Sahn & Stifel, 2002; Smith, Ruel, & Ndiaye, 2004). The gaps between the rural and urban populace in the region seems not to be closing (Sahn & Sahn, 2004; Sahn & Stifel, 2003). Consequently, the region's poor get marginalized from society and have little representation or voice in public and political debates including in development matters, making it even harder to get out of poverty and to improve their wellbeing (Lipton, 1977; Sahn & Stifel, 2002; United Nations Development Program, 2010a). The urban rural inequalities have also been reported to be the source of conflict on the continent (Stewart, 2010).

The region also grapples with challenges around fertility. Sub-Saharan Africa continues to experience a slow decline in its fertility, despite the recognition of a link between lower fertility and improvement of general wellbeing and ultimately the contribution to sustainable development (Potter, Schmertmann, & Cavenaghi, 2002; Todaro & Smith, 2006). Uncontrolled population growth has been found to impact development through its pressure on creation of wealth at the household, community and national levels, as well as its limiting of the expansion and access to education, health care and other opportunities including children's educational development (Todaro & Smith, 2006; United Nations Development Program, 2005b). Unsustainable population growth also makes it difficult for governments to cater for the needs of the increasing population (Ahlburg, Kelley, & Mason, 1996; Brockerhoff & Brennan, 1998; Global Futures Studies & Research, 2013). An improvement in reproductive health services and choices on the other hand has potential to advance development by helping meet the MDGs #1, #2 and #4 seeking to eradicate poverty and hunger; achieve universal primary education and to reduce child mortality respectively (Todaro & Smith, 2006; United Nations Development Program, 2005b). It has been argued that smaller families can enable adequate child nutrition and investment in education, which would ultimately enable faster social and economic development at the family, community and national levels (United Nations Development Program, 2005a). In addition, the ability for women to have choices on their reproductive health matters has potential to promote gender equality and women empowerment (MDG #3), while at the same time improving maternal health (MDG #5) and helping combat HIV/AIDS, malaria and other diseases. Improved fertility also has potential to enable access to adequate food, water, housing, sanitation facilities as well as improvement in health and education (United Nations, 2012). Despite this recognition, many countries in the region, including Kenya still experience poor fertility choices and outcomes. Consequently, most of the countries are either experiencing high fertility or a stall in the decline of their respective fertility rates, yet they also experience the least development progress and poverty decline. Fertility in the region was 5.1 births per woman between 2005 and 2010, a figure that exceeds its replacement level by more than two times (United Nations, 2011c). This fertility's contribution to an increase in the region's population is likely to make it impossible for the countries in the region to advance in development and improve the capabilities of its people, including improving incomes, health education, self-esteem, respect, dignity and freedom to choose (Todaro & Smith, 2006). This study therefore assesses the association between perceptions of participatory development

and fertility choices as a wellbeing outcome that has a bearing on development outcomes in the region.

2.3 Development and wellbeing inequalities in Kenya

Kenya, a developing country with a gross national income (GNI) per capita of US \$ 2,250 in 2013 (World Bank, 2014) has previously experienced both slow economic development and human development progress. The country's Human Development Index, an indicator of a country's general wellbeing was 0.535 in 2013, causing it to be ranked 147 out of 187 countries (UNDP, 2014). The country faces various challenges, including regional inequalities in development and in various sectors of development and wellbeing including infrastructure, health and education (CBS et al., 2005; World Bank, 2009). The least developed area in the country is North Eastern province, characterised mainly by its arid nature and the nomadic lifestyle of its inhabitants. At the same time, the most developed province is Nairobi, the capital city. The provinces, commonly known as regions, of Kenya face inequalities in other wellbeing aspects, such as income distribution, specifically the gap between the rich and poor, but also the differences in access to education, health, access and enjoyment of political rights and representation (CBS et al., 2005; Liang, 2006; Stewart, 2010). The inequality in the country is so unprecedented that Kenya was ranked among 10 most unequal countries in the world and the most unequal in East Africa (Republic of Kenya, 2007b). Most of these differences in development have resulted from structural inequalities, which in turn have made job creation and poverty reduction difficult, resulting in a country with one of the highest Gini co-efficient in Africa; with nearly a half of its citizens also living in poverty (World Bank, 2009). These inequalities ultimately negatively impact the most vulnerable of the country's populations.

Inequality, closely related to poverty, is an aspect of deprivation such that while poverty entails the inability to afford basic necessities for living, inequality distinguishes this inability between people, families, regions, countries etc. (Liang, 2006). Poverty and inequality continue to affect a significant percentage of the Kenyan population. The World Bank estimates that nearly a half of the Kenyan population live below the poverty line (Republic of Kenya, 2008a; World Bank, 2009), a state that ensures that most Kenyans are denied basic supplies needed for their survival, with those most affected being the urban poor and the rural poor (The World Bank, 2008). This situation arises from the lack of sustained economic

growth in the country. Since its independence in 1963, its growth has been uneven, starting with high growth rates in the 1960's and 1970's but stagnating in the mid-1970's till the 1990's (Adam et al., 2010). This poor performance has had a consequence on socio-economic development and wellbeing such that poverty, poor life expectancy, increased infant and maternal mortality, and poor educational achievement still abound in the country, giving rise to an increasingly vulnerable population (Yin & Kent, 2008). This vulnerability of the Kenyan people living in poverty is worsened, as it often goes beyond material poverty to include inequalities in various sectors including unequal distribution of power, health and other resources, contributing to socio-cultural inequalities which lead to increased marginalisation of the vulnerable groups, most of whom reside in the rural areas and in certain regions of the country (Okello, 2006; Stewart, 2010).

Inequalities, both in health infrastructure and health outcomes, amongst rural and urban residents and between and within provinces/regions in the country, have been widely reported. Regarding child health, although there is realization that many deaths in early childhood can be prevented if children are immunized against preventable diseases and receive prompt and appropriate treatment when they become ill, vaccination coverage is still not uniform across the country. The regional variations in the overall percentage of children who had received all the basic vaccines shows Central, Rift Valley and Eastern regions leading at 85.8%, 85.0% and 84.2% respectively while the other regions trail these indicators including; Coast at 75.8%, Nairobi at 73.1%, Western at 73.1%, Nyanza at 64.6% with North Eastern having the lowest coverage at 48.3% (KNBS & ICF Macro, 2010). The differences between rural and urban indicators are also clear. Although 77% of all children 12-23 months had been fully vaccinated in the country, the percentage of those fully vaccinated in urban Kenya was 81% while that of rural areas was 76% (KNBS & ICF Macro, 2010).

Malnutrition is still a serious problem in Kenya as the percentage of those under five children who are stunted (those having too low a height for their age) stands at 35% nationally with the urban areas having lower rates than the rural Kenya at 26% and 37% respectively (Table 2.1). In addition, the percentage of underweight children (those having low weight for their age) stands at 16% nationally, 17% in rural Kenya with the urban areas having much lower rates of 10% (KNBS & ICF Macro, 2010). These statistics are even more worrying because it is estimated that about 70% of the illnesses that cause death among the under five children in the country are exacerbated by malnutrition, indicating that children from rural Kenya

have higher risks of morbidity and mortality resulting from malnutrition, compared to those from urban Kenya (National Coordinating agency for Population and Development (NCAPD), Ministry of Health (MOH) [Kenya], Central Bureau of Statistics (CBS), & ORC Macro, 2005). This situation is likely to worsen further, given that Kenya's poverty alleviation efforts have not borne much fruit and yet poor nutritional status and poverty are interlinked. Undernutrition leads to poverty and poverty in turn, influences undernutrition and exacerbates the impacts of this condition. Malnutrition is therefore likely to negatively impact development and slow down the achievement of the MDGs because of its potential impairment of the learning ability in children, thereby leading to low productivity and poor investment in human capital (Fotso, 2007; Frongillo, deOnis, & Hanson, 1997; Madise et al., 1999; Victora et al., 2008). In addition, the impact of the condition on the child has a lifelong effect on the individual and ultimately on a country's development, as its impacts on the cognitive development of the individual affected are irreversible (ACC/SCN, 2004; FAO, 2005; Victora et al., 2008).

Table 2.1: Percentage distribution of malnutrition by province and by place of residence in Kenya, KDHS 2008-9

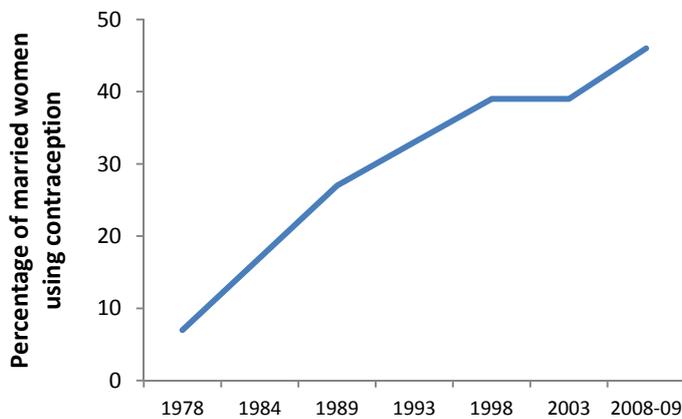
Province	Percentage severely stunted	Percentage stunted
Nairobi	8.7	28.5
Central	9.4	32.4
Coast	14.3	39
Eastern	17.1	41.9
Nyanza	13	30.9
Rift Valley	14.9	35.7
Western	14.8	34.2
North Eastern	17.7	35.2
Urban	8.7	26.4
Rural	15.3	37.1

Source: Kenya Demographic and Health Survey 2008-09 (KNBS & ICF Macro, 2010)

Although contraception use in the country is gradually improving over the years, there are still differences by place of residence (urban/rural) and also regionally. As indicated in Figure 2.1 there has been a steady improvement in the percentage of married women using any modern method of contraception, from 7% in 1978, 17% in 1984, 27% in 1989, 33% in 1993, 39% in 1998 and 2003 and 46% in 2008/09. However the regional imbalances are still very clear. The 2008/09 indicators (Figure 2.2) show that the percentage of women using any methods in the urban area is higher compared to the number using contraception in rural Kenya (KNBS & ICF Macro, 2010). In addition, some provinces of the country have higher

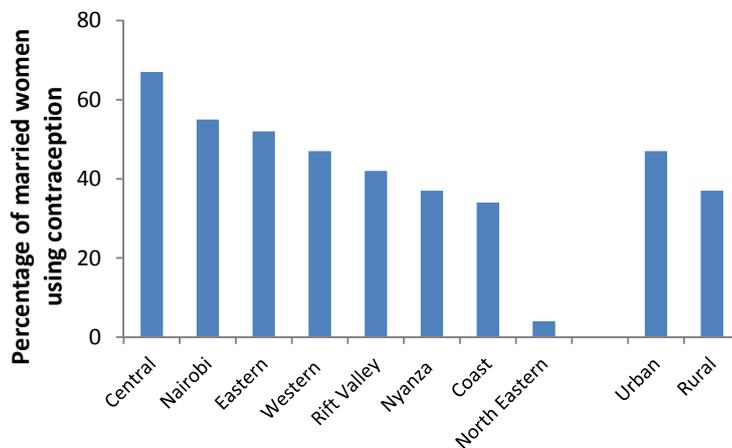
rates, for instance Central province has the highest rate (67%), followed by Nairobi (55%), Eastern (52%), Western (47%), Rift Valley (42%), Nyanza (37%), Coast (34%) and North eastern (4%). Further, a look at the facilities offering modern family planning methods indicates that Nairobi has 68% of its facilities offering this service while Central has 89%, Eastern has 79%, Western (93%), Rift Valley (92%), Nyanza (93%), Coast (75%) and Eastern 67%) (KNBS & ICF Macro, 2010). Consequently, the total fertility is also higher in the rural areas (at 5.2 children, compared to 2.9 in urban Kenya) and in some regions: 4.4 in Eastern, 5.6 in Western, 4.7 in Rift Valley, 5.4 in Nyanza, 4.8 in Coast and 5.6 in North Eastern Province compared to 2.8 in Nairobi and 3.4 in Central where fertility is lower (KNBS & ICF Macro, 2010).

Figure 2.1: Trends in contraception use by married women (15-49) in Kenya, KDHS 2008-9



Source: Kenya Demographic and Health Survey 2008-09 (KNBS & ICF Macro, 2010)

Figure 2.2: Percentage of married women (15-49) in Kenya using contraception by region, KDHS 2008-9



Source: Kenya Demographic and Health Survey 2008-09 (KNBS & ICF Macro, 2010)

Other demographic outcomes also show regional and rural/urban variations. Life expectancy is for instance, 19 years less in Nyanza province, compared to Central province, and that of Meru district (in Eastern province) which is double that of Mombasa district (in Coast province) (KNBS, 2007b). Regarding health indicators, HIV prevalence rates also vary across the Kenyan regions with Nyanza Province having the highest HIV/AIDS prevalence rate of 15.3% , compared to the national prevalence of 9.2% for women and 5.8% for men, and a paltry 1.0% in North Eastern Kenya (National AIDS and STI Control Programme & Kenya Ministry of Health, 2008). These varying statistics could be a result of the variations in the provision of health services, which are also is also unequal. The doctor-patient ratio varies across the regions with Central province having one doctor for 20,000 people while North Eastern province has one doctor per 120,000 people (KNBS, 2007b).

These differences in access to, and resultant variations in health and wellbeing outcomes therefore imply that the poorest in society and the rural people have poorer health conditions and are also likely to die young. North Eastern province, the poorest province in the country has poorer health and wellbeing indicators. At the global level, research points to this cyclical nature of poverty and poor health outcomes, where the world’s shortest life expectancies occur in the world’s poorest countries and communities (World Health Organization, 2006).

The health and wellbeing indicators also consistently portray those in rural Kenya as being more disadvantaged than those in urban Kenya, although those living in Kenya's poor urban areas sometimes exhibit poorer health outcomes compared to those in rural Kenya.

Other than regional variation, these inequalities are also observed at a more micro-level in the country. About 72% of households in Nairobi district have electricity and only about 13% of people in the same district rely on lantern and tin lamps (Republic of Kenya, 2011a). Kiambu, a predominantly urban district adjacent to Nairobi also has high percentage of electricity use at 53%, while only about 19% of its households use a tin lamp for lighting. On the contrary, some districts/counties¹ have low electricity supply, for instance, in Kwale district, only about 6% of the households have electricity while a majority of households in this district (about 76%) use tin lamps for lighting. The other districts have far lower levels of access to clean energy (electricity), including Mandera (about 3%), Tharaka Nithi (about 3%) and Kitui district (about 5%). Makueni district has only about 6% of households using electricity, with a majority (63% and 25%) using lanterns and tin lamps respectively, for lighting (Republic of Kenya, 2011a).

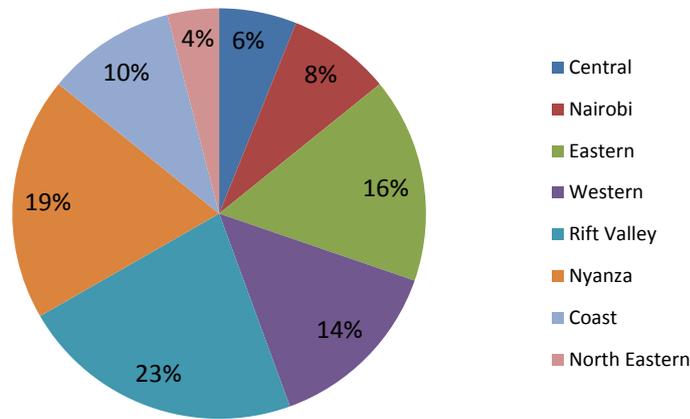
2.3.1 Geographic distribution of poverty in Kenya

Similar to other indicators of well-being, there exist varying levels of poverty in the country, with the various provinces making varying contributions to the national poverty. Figure 2.3 gives a summary of the poverty distribution by province as follows: Nairobi province contributes 6% to the national poverty level with an estimated 874,058 poor people; Central province contributes 8% with about 1.1 million poor people; Coast province contributes 10% with an estimated 1.363 million poor people; Eastern province 18% with an estimated 2.62 million poor people; North Eastern province contribute less than 4% to total national poverty with an estimated half a million poor people; Rift Valley province contributes just over 22% to the total national poverty with an estimated 3.18 million poor people; Western province contributes almost 14% to total national poverty with an estimated 1.99 million

¹ Kenya has 47 county governments, which were created in March 2013, after adopting a new constitution in August 2010. This number was based on the delineation of administrative districts as created under the Provinces and Districts Act of 1992. The County boundaries are based on those of the country's 47 districts at independence in 1963.

poor people while Nyanza province contributes 19% to total national poverty with an estimated 2.73 million poor people (CBS et al., 2005).

Figure 2.3: Percentage provincial contribution to national poverty in Kenya²

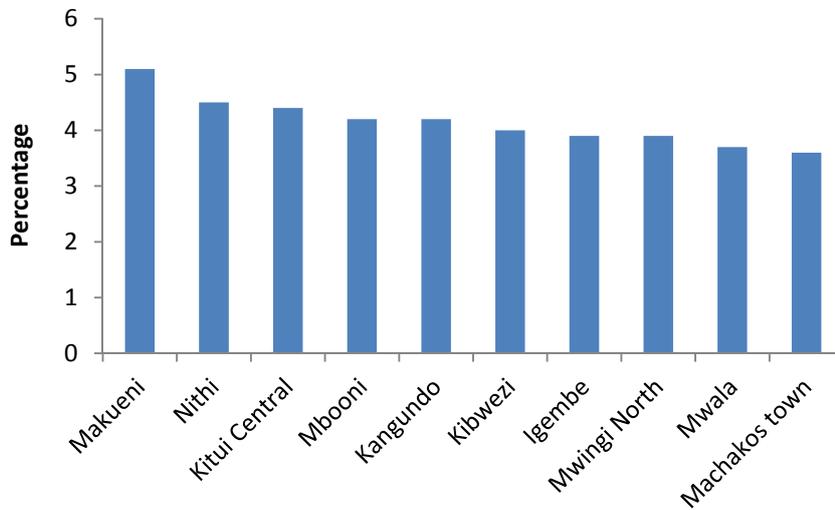


Source: Geographic Dimensions of Well-being in Kenya (CBS et al., 2005)

Even within the provinces, there are huge inequalities with some districts and constituencies being poorer than their counterparts in the same province, for instance, Nairobi province, which is also a district (and now a County), with 8 political constituencies has a poverty incidence of 44%, but this varies in the various individual constituencies; Westlands constituency has a poverty level of 31% while that of Makadara is 59% (CBS et al., 2005). In addition, almost a half of the poor in the province (49%) hail from just 3 of the 8 constituencies; Embakasi (19.1%), Kasarani (17.3% and Makadara (12.5%). The same pattern can be observed in Coast province, where poverty incidence in the poorest constituency (Ganze) is almost 3 times that of Bura constituency, the least poor one. In Eastern province, 42% of the poor are concentrated in 10 of the 36 constituencies: Makueni (5.1%), Nithi (4.5%), Kitui Central (4.4%), Mbooni (4.2%), Kangundo (4.2%), Kibwezi (4%), Igembe (3.9%), Mwingi North (3.9%), Mwala (3.7%), and Machakos Town (3.6%) and yet Saku and Laisamis constituencies each contribute less than a half of the provincial poverty (CBS et al., 2005). Figure 2.4 indicates that Makueni constituency has the highest poverty level amongst the 10 poorest in Eastern province.

² Data extracted from a report titled 'Geographic Dimensions of Well-being in Kenya' (CBS et al., 2005)

Figure 2.4: Percentage distribution of poverty in 10 of the poorest constituencies in Eastern province



Source: Geographic Dimensions of Well-being in Kenya (CBS et al., 2005)

2.4 Development efforts being undertaken in Kenya

In an effort to foster development and improve wellbeing in the country, the government of Kenya has designed and implemented many development and poverty alleviation projects. There have been specific decentralised development initiatives, with the aim of improving the well-being of the poor (CBS et al., 2005). One of the most common means through which decentralised development has been handled by the government has been through government line ministries tasked with distributing the resources allocated at the provincial levels, the district levels and to the communities. In addition, the Kenyan government's plans to reduce regional imbalances have seen it come up with various strategies recognising the need for substantial and sustained efforts at development. These efforts were initiated in order to reduce poverty and ensure equitable development, by going beyond just improvement in economic growth rates (CBS et al., 2005). With this recognition, the government has been designing and implementing pro-poor and targeted policies to improve the well-being of the poor and the vulnerable (CBS et al., 2005). The plan was to ensure that the various government sectors and the various different levels are able to plan and deliver key essential services including better schools, a stronger health care system, and a safety net that effectively protects the marginalized and the vulnerable (CBS et al., 2005). Some of these

initiatives include the national poverty eradication plan initiated in the 1990s and the Medium Term Expenditure Framework/Poverty Reduction Strategy Paper (MTEF/PRSP) (Republic of Kenya, 1999). The other key strategy, which has sought to incorporate community participation in development, is the Poverty Reduction Strategy Paper (PRSP) approach, initiated by the International Monetary Fund (IMF) and the World Bank in 1999. This was done with the goal of enhancing development-ownership, thereby ensuring sustainable development (IMF, 2011). The PRSP papers which are country-specific usually contain an assessment of poverty and a description of the macroeconomic, structural, and social policies and programs that a country intends to pursue over several years, to promote growth and reduce poverty. The papers also contain external financing needs and the associated sources of financing and are prepared by governments in low-income countries through a participatory process involving domestic stakeholders and external development partners, including the IMF and the World Bank (IMF, 2011). They are further updated every three years with annual progress reports. Poverty Reduction Strategy Papers (PRSPs) have been implemented by most African governments, including Kenya.

Some of the other approaches employed by the government of Kenya include the approach -by all governments globally to improve health- is the Millennium Development Goals (MDGs) development approach (United Nations, 2011b). Over the years, the government of Kenya has sought to mainstream the MDG plans into its policies and plans. Kenya's implementation of the millennium development goals (MDGs) can be said to have started in 1965, when the Kenyan government at the time planned for the elimination of disease, ignorance and poverty, plans that were articulated in the sessional paper no.10 of 1965 (Republic of Kenya, 1965). Other than this, the various governments that the country has had since independence continue to incorporate the MDG goals in their plans, for instance, by incorporating targets geared towards meeting the MDGs in the policy and programme documents as well as by allocating funding for the implementation of the various targets (Republic of Kenya, 2008b, 2013). In addition, the government has increasingly mainstreamed MDG goals in their project plans and interventions. The country has made overt plans geared towards meeting the MDGs, for instance by planning for their implementation in the Economic Recovery Strategy (ERS) for 2002-2007, incorporation into Kenya's Vision 2030 plans, the first and second Medium Term Plans (MTP 2008-2012 and MTP 2013-2017) and incorporating in the government's District Development Plans (Republic of Kenya, 2008b, 2013). The devolved county governments are also making efforts

to ensure that MDGs plans are incorporated into their newly government plans (Mailu, 2013).

In addition, more recently, the government of Kenya has been implementing the Constituency Development Fund (CDF) through which development resources are devolved to the constituency offices, headed by a member of parliament and which determine development projects to be undertaken in the constituencies (Constituencies Development Fund, 2011). At the same time, there has been the Local Authority Transfer Fund (LATF), through the local authorities where development funds are disbursed to, and utilised in the local authorities (Kenya Ministry of Local Government, 2011). Presently, the government of Kenya has set development plans whose plans are to ensure that it becomes a globally competitive and prosperous nation with a high quality of life by the year 2030 through its Vision 2030, a development plan that aims to see annual growth rates of 10% over the next 20 years (Republic of Kenya, 2007b). To achieve this goal, there are various strategies and efforts put in place, including equitable improvement of all regions of the country, improvement of the quality of life, expansion of the democratic space and improvement in the country's infrastructure. Reduction in the country's regional inequalities and improving access of services by the rural poor, will therefore be a major achievement of this development vision. The major step to take in this effort is to involve beneficiaries of government services in development projects. Beginning March 2013, the Kenyan government implemented a devolved system of governance whereby the original 47 districts of the country (these were 47 at independence in 1963), were turned into counties. (The World Bank, 2014a). These counties operate as autonomous governance institutions and are given a budgetary allocation from the central government to run development programmes independent of the central government. It is expected that initiated development projects are determined by the local leadership at the county level, thereby reflecting the local population's felt needs, and ensuring more sustainability and consequently equitable development in the country, which could eventually help achieve Kenya's Vision 2030. This system of governance and therefore development promises to help achieve this as it deviates from the model previously adopted by the Kenya's central government whereby development projects were traditionally planned from a central point, hence the unequal development since in most cases, they may not reflect the local needs and resources.

It is therefore obvious that the Kenyan government has clear development strategies outlined. However to realise the equitable and sustainable development that these plans seek to achieve, beneficiaries of these development plans and initiatives need to be involved in the decisions and actions. Although some of the development efforts initiated by the government of Kenya have borne fruit, for instance, the Kenyan economy experienced steady growth from 2002 to 2007, these efforts were quickly eroded due to political upheavals, natural disasters and the global economic meltdown. The most disrupting event of this growth, was the 2007 post-election violence, which occurred after the disputed 2007 general elections (World Bank, 2009). This growth had been broad and its impacts had been felt in many sectors of the economy. Growth in the country's Gross Domestic product (GDP) had increased from 5.1 per cent in 2004, to 6.3 per cent in 2006 to 7.1 per cent in 2007, with the major driving sectors including transport & communication, tourism, agriculture, manufacturing, construction, hotels and restaurants (World Bank, 2009). In effect, there was growth in per capita income, from -1.7 per cent in 2002 to 4.1 per cent in 2007, thereby impacting the grassroots' poverty levels reduced from 57 per cent in 2006 to 46 per cent in 2006/07 (World Bank, 2009). This development progress and efforts have however faced challenges, for instance, due to inequalities in progress in various regions of the country. In addition, Kenya continues to face challenges around youth employment, one of the main causes of the 2007/2008 violence that occurred after the 2007 elections (Republic of Kenya, 2010). There is also generally poor remuneration whereby about 33.3% of employees in the country earn less than USD 1 per day and the unemployment rate stands at 12.7% (KNBS, 2007a). Amidst the economic decline the country has experienced, there has been high growth in labour demand in the country, whereby the annual labour force in Kenya was 3 per cent between 1990 and 2005 (Republic of Kenya, 2010). This growth is very high and has not matched the slow economic growth faced in the country in the same period.

While the Kenyan government has tried to foster the country's development since independence, these successes are however unstable, since the country still faces some challenges in some sectors, made worse by political and social upheavals, as well as by such disasters like drought, thereby being ranked 147th out of 182 countries worldwide in the United Nations Development Program's 2009 human development index (United Nations Development Program, 2009). In addition, the World Bank recently estimated that almost a half of all Kenyans live below the poverty line (World Bank, 2009).

These challenges point to the need to revisit the development approaches currently being used in the country and adopt those that have potential to improve the outcome of development initiatives. Failures in the initiatives and approaches previously adopted have been documented. Pritchett and Woolcock for instance identify some of the contributing factors for the persistent failure in the implemented initiatives, including the use of top down approaches, implementation of ‘one size fits all’ initiatives and poor implementation of decentralised initiatives (Pritchett & Woolcock, 2004). Although one of the most important initiatives with potential to ensure sustainable development is the participatory approach, some shortcomings have been identified in its implementation leading to poor outcomes. Pritchett and Woolcock argue that even when participatory initiatives are undertaken, the outcome depends on the mode of implementation. Proponents of the principal agent based models explain this failure as resulting from the disconnect that may occur when the principal (development initiator) fails to meet the needs, interests and expectations of the agents (beneficiaries of development), thereby leading to an outcome that may also be undesirable to the principal (Asian Development Bank, 2004; Pritchett & Woolcock, 2004).

2.5 Poor development progress in Makueni County/Makueni County profile

Makueni district, now Makueni County³ is one of the administrative units in Eastern Province, Kenya, located about 100 Km from Nairobi and covering an area of 1,710.2 Sq Km, with a density of 290. The district was carved out of Machakos district in 1992 and has a total population of 253,316, with 122,443 males and 130,873 females and 52,004 households (KNBS, 2010). The district has five constituencies namely, Mbooni, Kilome, Kaiti, Makueni and Kibwezi. It came into existence as a government-supported settlement area since 1948-the area was initially a bush, and because of this, the population density is still low.

The area is semi-arid and rainfall is very unpredictable, experiencing, like many other parts of Kenya, two distinct rainy seasons, namely the short rains (occurring in October-

³ Following the adoption of the 2010 Kenya constitution, which replaced the 1963 constitution, Kenya now has devolved government system, referred to as the Counties. These are based on Kenya’s 47 districts, implemented in the 1963 constitution.

December) and the long rains (occurring in March-May). While the long rains contribute to higher agricultural production in most parts of the country, studies done in Makueni however indicate that the short rains usually constitute higher volumes of rain and are often more reliable than the long rains (Gichuki, 2000). The area therefore experiences droughts during times when it receives less than 250 mm rainfall a year-which happens often, and this, coupled with the high temperatures in the area which lead to high evaporation rates, particularly in the low lying areas, leading to drought and many incidences of crop failures and food shortages, some of which are very severe (Ewel, 1999; Republic of Kenya, 2009). Average annual rainfall ranges from more than 1000 mm in the highlands to slightly less than 500 mm in the low land areas of the district and the low land areas also experience high evaporation rates. The district is also served by Athi River which is perennial as well as with other smaller rivers, mainly originating from the hills and draining into the Athi River, although these rivers become quite irregular downstream, making them mainly seasonal and at the same time being the main source of water for livelihood by people from the low-lying areas of the district. This is made possible because the rivers store water beneath the surface by the use of sand. Their seasonal nature means that people using them as a source of water have to dig shallow wells to access the water (Gichuki, 2000).

Most of the rainy seasons in the district are highly unpredictable, and the poor harvesting and storage of the scarce water compounds the problems for farmers who are-in most cases- unable to capture and utilize this water. As a result, and also being a semi-arid area, located far from river sources, or served mainly by seasonal rivers, rainfall is the most important source of water. In many instances however, the district/county is rarely served with adequate rainfall. The continuous lack of enough rainfall and therefore the cyclical drought conditions has therefore necessitated innovation from community members. Some of the strategies used include planting drought-escaping crops, including new breeds of maize (i.e. Katumani maize) that take a very short time to mature and the use of drought resistant crops e.g. pigeon peas and green grams (Gichuki, 2000). Farmers in Makueni also engage in production of other cash crops that can endure the dry conditions. This includes cotton farming-although the recent attempts at reforms in the cotton industry has reportedly been mishandled, bringing very little profits to farmers, a situation that has led to many of them abandoning cotton farming and resorting to maize-farming, which is less reliable because of poor rains in the area (Gichuki, 2000). Even with the farming activities, the area residents still face infrastructural challenges in getting their produce to the markets.

This semi-arid nature of Makueni district, and the unreliable rainfall has driven researchers to stress the importance of prioritizing development initiatives in the region, based on the strengths of community members, in order to utilize indigenous knowledge (Gichuki, Mbohoh, Tiffen, & Mortimore, 2000). One of the reasons elaborated is that local farmers have wide knowledge of the best practices, most likely to improve the production of their lands, given the semi-arid conditions. They proposed some of the areas in which local community would give their input as including developing a water plan, being involved in government reforms affecting the productivity of their lands, improving the education system, infrastructure and the management of the local amenities and services regarded by the community as the most essential for their development (Gichuki et al., 2000). Development planners and implementers in the district have however not widely incorporated local knowledge or actively involved community members in projects initiated in the district. As a result, poverty in the district is still high, people still face inadequate food during the drought periods, thereby relying on the government for food aid. The district also generally lags behind many other districts in the country in development. Indeed, studies indicate that the district has high poverty levels, with 64% of its households being classified as poor (Republic of Kenya, 2011c).

The allocation of funds to the district through the devolved systems of development, specifically the local authorities and the constituency has had the potential to make huge development strides. One of the avenues through which funds have been disbursed to the district has been through the Constituency Development Fund (CDF) fund which was specifically established under the CDF Act, 2003, and whose mission is to ensure that a specific portion of the Annual Government's ordinary revenue is allocated to the constituencies for development purposes and poverty reduction at the constituency level (CDF Board, 2010). It was entirely supposed to be used for the creation of wealth at the grass-root level, while ensuring high accountability levels in the use of these funds. The amount of money allocated and used for development projects in the district through these devolved systems has been increasing over the years, from Ksh. 100,133,888 (USD 1,251,673.6) in 2002/03 to Ksh. 280,371,126 (USD 3504639.075) in 2008/2009 (Republic of Kenya, 2011b) (USD to Ksh. exchange rate of Ksh. 80 per 1 USD) and yet, poverty levels in the district remain high. Although this approach to development is not only geared towards more decentralised approach to development of the various constituencies of the country, while seeking to ensure equality in development by favouring the poorest constituencies for

more allocation of the funds, more grassroots efforts need to be incorporated in order to ensure sustainable development. This is especially important given the new devolved governance structures geared towards decentralised development (The World Bank, 2014a). Seeking communities' views about the projects to be implemented is one approach, and yet this has largely been lacking in these initiatives. Given the approach employed by the CDF committee, the poorest constituencies (Makueni being one of the poorest) are eligible for larger funds which if used effectively, have huge potential to ensure great strides in the development of the district (CDF Board, 2010). The CDF funds, mainly used for development projects on education (including to schools and educational bursaries), health, water, livestock & agriculture, infrastructure (including electricity) and security have potential to propel development in Makueni district. There is need to incorporate the community's views and efforts more especially in the development efforts initiated and implemented by the new county governments. This has potential to help meet Makueni county government's development plans consequently also helping achieve Kenya's Vision 2030's plans.

2.6 Theoretical frameworks in study of development

This section provides a synthesis of various development theories, highlighting the main tenets of the theories, their strengths and weaknesses and indicating their suitability in guiding this study. The theories analysed in the section include the Modernization theory, the Dependency theory, the Neoliberalism theory of development, the Sustainable Development Approach, Amartya Sen's Capability Approach and Gender and Development theories.

2.6.1 Modernization school of development

The Modernization school of development comprises theories popular in the 1950s and 1960s arguing for linear development whereby all societies progress through similar stages of development in a uni-linear manner and that developed nations are models of how the developing countries would look like once developed (Kambhampati, 2004; So, 1990). The modernization theorists used the European model of development in this argument. They theorists posit that the development situation (stage/s) that developing countries find themselves in is an exact mirror of the developed countries at some point in history (Rostow, 1960). Because of this similar path therefore, proponents of the theory emphasised that in order to help the developing countries to reach the same level of development as the

developed countries, there is need to nudge them along the same path taken by the now developed countries. In this path, various things come into play to facilitate development, including increased investment, technology transfers, and closer integration into the world market (Kambhampati, 2004; Kingsbury et al., 2004). Modernization theorists further highlight the factors existing in developing countries that are responsible for underdevelopment. These include lack of advancement in the countries' industrial standing, high levels of illiteracy, lack of communication and infrastructural facilities and a traditional attitude of the population. The main tenets of the modernization approach to development were industrialization and urbanization, considered at the time to be the main pathways through which development could be achieved.

One weakness of this theoretical approach is that its application has failed to bring about the planned 'development' for developing countries. The modernization approach of development has on the contrary contributed to some unexpected outcomes including dependency. Developing countries have emerged to be highly dependent on the developed countries, a situation that has arisen from the relationship between the developing and developed countries and is the cause of the helplessness that befalls developing countries which constantly need assistance from the developed countries (Kambhampati, 2004; Lall, 1975; Moyo, 2009). This state of dependency considered to me a major obstacle of development for the developing countries is observed in various areas including technology and monetary aspects. The idealistic and Eurocentric nature of this approach basing its assumptions on the path that Europe took in development is also criticised and is therefore inappropriate in guiding participatory and equitable development studies in a developing context (Bernstein, 1971). The theory fails to acknowledge the unique features in the different world contexts, including environment, culture and people, all of which have a role to play in sustainable development. The contribution that people make in development is also not captured in this approach. The other shortcoming of this theory relates to its inability to highlight the indicators of development in terms of wellbeing, rather it only focuses strictly on the economic development aspect through its emphasis on a country's progression from a 'traditional' situation to a 'modern' one as a sign of development. The ultimate aim of development and development approaches and assessments need to be assessed based on important indicators like improved health, life expectancy, education, reduced poverty, improved capabilities and the inclusion of development recipients in development plans and initiatives. These shortcomings make the theory inappropriate to guide this study.

2.6.2 Dependency theory of development

Dependency theorists sought to address the gap identified in the modernization theory where, the relationship between the developed and developing nations was not highlighted (Futardo, 1964; Kambhampati, 2004). These theorists challenge the notion (of the Modernization theory), which states that all societies progress through similar stages of development, in a uni-lineal manner following the path that Europe took. In rejecting this view, they argued that developing countries are not just mirror images of the developed countries (at a certain stage of development-for the developed countries). Rather, that they have some unique characteristics, in the form of features and structures which are determinants of their development. Additionally, dependency theorists argued that underdevelopment arose from the Western capitalistic processes which have denied developing countries a chance to develop due to the exploitative relationship with developed countries (Baran, 1957; Futardo, 1964; Kambhampati, 2004). They supported the idea of development as one focusing on the roles of governments as the main development stakeholders as well as development being best achieved through increased international investments including through loans and development aid, factors which have been criticised for enhancing the dependency of the developing countries on the developed ones (Moyo, 2009). In this relationship, developed countries are viewed as exploitative because resources flow from the poor and developing countries (known as the "periphery") to the wealthy and developing countries (known as the "core"), at the expense of the former (Baran, 1957; Kambhampati, 2004). This exploitation entails the extraction and expropriation of natural resources including cheaper raw materials, subsistence output and low wages and ensuring an increased demand for imports by the developing countries from developed countries. Dependency theorists also argue that developing countries are used as market for dumping cheap technology. These complexities are therefore viewed as being responsible for the increasing budget deficits and foreign investment in developing countries, thereby increasing their dependency on the developed countries.

Proponents of this theory are of the view that, in order for developing countries to break this cycle of surplus extraction, they would need to reduce their connectedness with the developed countries, particularly in the world market (Kambhampati, 2004). They argue that developing countries should instead focus on systems that address their own needs, although they also highlight the difficulties that come with these efforts. To dependency theorists,

attempts by developing countries to detach from this relationship are normally resisted by developed countries through the use of economic and military force (Kambhampati, 2004).

This theory however has weaknesses as its proponents failed to incorporate other factors that may be responsible for underdevelopment in developing countries. Yet the continued poor development situation that most developing countries find themselves in can be viewed as going beyond dependency on developed countries, to include other factors such as corruption by the leaders of the developing countries, misuse of the poor countries' resources, poor prioritization of development initiatives and incorporation of local knowledge and community participation in development (United Nations Development Program, 2003). The theory also fails to account for the development strides made by a majority of the Asian countries, although, just like other developing countries, were involved in the world market. In addition, this theory does not adequately explain the development inequalities both among the various world regions, but also within countries, as is the case for Kenya. It is therefore inadequate to guide the current study, because it also fails to account for the people's participation in development within their contexts as a means of achieving sustainable development.

2.6.3 Neoliberalism theory of development

Although this concept does not have a clear definition, it is generally described by the various authors and academics who have attempted to understand it as a development approach advocating economic liberalizations, free trade and open markets and supports the privatization of nationalized industries, deregulation, and enhancing the role of the private sector in modern society (Peet & Hartwick, 2009). Neoliberal theorists support the view that there needs to be a transfer of the control of economy from the public to the private sector. This, they believe, has potential to produce a more efficient government and improve the economy of a state (Cohen, 2007). Although first coined in 1938 by the German scholar Alexander Rüstow, this approach to development is reported to have been advocated for, and consequently 'imposed' by powerful financial institutions, including the International Monetary Fund (IMF) and the World Bank (Moyo, 2009). The financial institutions believed that this approach had potential to produce more efficient governance systems and improve the economic health of nations (Moyo, 2009).

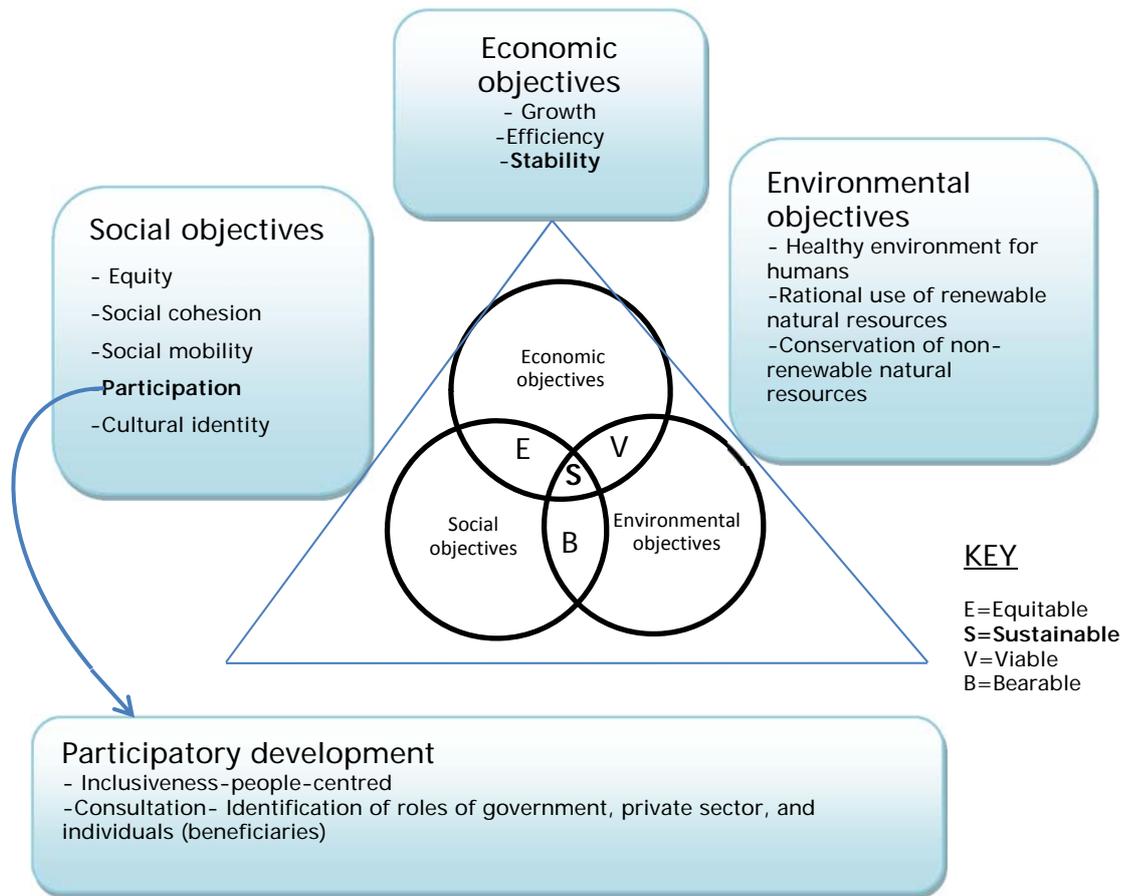
This approach has however been criticised for its contribution to dependency and therefore to the increasing underdevelopment of poor countries (Moyo, 2009). It has been criticised for having made rich countries grow richer and the poor grow poorer as well as facilitating the spread of global capitalism and consumerism (Chomsky, 1999; Plehwe, Bernard, & Gisela, 2006). Although the approach has been applied in most of the sub-Saharan African countries, it has failed to bring about the desired development, instead, it has fostered poor outcomes, including the deterioration of per capita income (Chang, 2009; Moyo, 2009). Whereas Per capita income in Sub-Saharan Africa used to grow at 1.6% in the 1960s and the 1970s, once the Neoliberalism approach was adopted, the per capita incomes shrank, and instead grew at the rate of -1.1% by 1995 (Soubbotina & Sheram, 2000). This approach, further does not consider the role played by indigenous communities, knowledge and resources in local development. It also fails to consider the importance of the environment both in achieving development but also as an outcome of development. It is therefore not suitable for this study.

2.6.4 Sustainable Development Approach

Recent development strategies emphasize the importance of ensuring that any development plans and initiatives employed can ensure sustainable development. Sustainable development is defined as the development approach that seeks to meet the needs of the present populations without compromising the ability of future generations to meet their own needs (Kates, Parris, & Leiserowitz, 2005; Smith & Rees, 1998; United Nations, 1987), was initiated by the International Union for the Conservation of Nature and Natural Resources (IUCN) in 1980 (IUCN, UNEP, & WWF, 1980). This approach emphasizes the connection between development and conservation and therefore the importance of ensuring that environment and development are inseparable things in the quest for development (United Nations, 1987). The United Nations fronted this as the best approach to development following concerns of the continued deterioration of the human environment and the natural resources, making it impossible to achieve both economic and social development. The organization believes that sustainable development that seeks to meet current needs, while preserving the environment for future generations' needs should become the central guiding principle of development that should be adopted by not just the UN, but also by other development stakeholders, including governments and private institutions (United Nations, 1987).

This theory can however be criticised for mainly concentrating on the environmental aspects of development and neglecting other economic and social aspects that are equally important for development. In addition, the theory's emphasis on conservation of current resources for future generations, catering for the needs of the present populations while at the same time striving to achieve economic development is not sustainable. This is because of the finite nature of the available world resources. Instead, emphasis needs to be placed on development approaches where development actors avoid the single-handed approaches to development whose quest to address certain needs fails to consider the impact of these actions on the other related aspects. Rather, more participatory development should be the ideal approaches that have potential to ensure equitable development that improves people's wellbeing. This sustainable environment approach could therefore be modified to one that ensures that consideration is given on impact of development beneficiaries' actions on the environment, the process, the social environment and the allocation of resources. The aim of such a modified approach, it can be argued, is all-inclusive because it incorporates all the factors important in the development cycle. The modified approach also puts into consideration the roles of the various actors in development, in the different contexts to design strategies that are uniquely beneficial to the particular contexts. By default therefore, this modified approach can incorporate the role of development beneficiaries in the development process by seeking to balance three groups of objectives (social, economic and environment) in its development plans (Figure 2.5). Ultimately, the approach seeks to be all-inclusive in development (Soubotina & Sheram, 2000), such that, ignoring one of the aspects can threaten economic growth as well as the entire development process. In addition, following the argument for people-centred development, this approach would incorporate a community element and would further approach development as both a process and an outcome whereby development as an outcome should incorporate development as a process which enhances people's capabilities.

Figure 2.5: A summary of the Modified Sustainable Development Approach



Source: Adapted from World Bank, Kingsbury D (2004) et al (Kingsbury et al., 2004).

2.6.5 Amartya Sen's Capability Approach

In addition to the Sustainable Development Approach, this study is guided by the Capability approach, posited by Amartya Sen (1999). Sen argues that development can be understood as a process of expanding the real freedoms that people enjoy (Sen, 1999). To Sen, development is more than an availing of material resources; although recognised as being necessary, material resources are however not sufficient to enhance development and the improvement of people's wellbeing and capabilities. In addition, he suggests that poverty, which depicts an absence of development in the current study, be seen as the deprivation of basic capability rather than merely as an income based measure. In order to address sustainable development therefore, Sen advocates for a development approach that has

potential to ensure that people's capabilities are improved. The Capability Approach has two main tenets; capability and functioning. Functioning is viewed as relating to the things that a person may value being and doing and these vary from very simple ones for instance, having proper nourishment, being free from preventable disease and premature mortality to complex ones like being able to participate in community activities (Sen, 1999). Capability on the other hand refers to the various factors that enhance a people's freedoms. Such factors, according to Sen may entail cushioning the very poor; whereby even in a country/society experiencing progressive economic growth there will always be a cluster of people who may be vulnerable and who may also succumb to deprivation. In such a case, the government may for instance, think of initiating such policies as unemployment benefits, as well as such mechanisms as famine relief for the vulnerable people who may otherwise starve to death. Insurance for the poor is indeed premised as a good response in cushioning the poor and the vulnerable from such shocks including natural, health, social and economic risks, factors that exacerbate their poor statuses, further negatively impacting their capabilities (Barrientos & Hulme, 2008). To sum it up, Sen views development as a process of expanding the real freedoms that people enjoy. These freedoms include; political freedoms, economic facilities; social opportunities; transparency guarantees and protective security. He argues heavily against looking at development as just the rise or fall in incomes. Rather, income should be considered to be valuable only in so far as it can increase the capabilities of individuals and thereby enable people's functionings in society (Sen, 1999).

One of the major aspects that can be said to have potential in improving people's capabilities are the Millennium Development Goals (MDGs) (Kates et al., 2005). These goals include; Goal #1: Eradicate extreme poverty and hunger; Goal #2: Achieve universal primary education; Goal #3: Promote gender equality and empower women; Goal #4: Reduce child mortality; Goal #5: Improve maternal health; Goal #6: Combat HIV/AIDS, malaria and other diseases; Goal #7: Ensure environmental sustainability and Goal #8: Global partnership for development. It can be premised that the achievement of the MDG goals has potential in ensuring that people's wellbeing and standards of living are improved.

In addition to understanding the Capability Approach's two main principles of development (Capability and Functioning), Sen (1999) also appreciated the importance of participatory development in ensuring progress in development. He highlights the role of an agent in development-bringing about a change in society. He talks of an agent '*...as someone who acts*

and brings about change, and whose achievements can be judged in terms of her own values and objectives, whether or not we assess them in terms of some external criteria as well. He further stresses that the role of an agent can be through an individual or member of society and as a participant in economic, social and political actions (Sen, 1999 p. 19). This perspective points to the importance of community participation in development.

Amartya Sen's contribution to the debate on community participation in development emphasizes the importance of empowerment of beneficiary communities (Sen, 1999). His Capability Approach has been compared with the rights-based approach (RBA) and the sustainable-livelihoods framework (SLF), both of which seek to empower development-recipient communities and governments and also emphasizes the achievement of human rights as a development objective and the advocating for sustainable livelihoods (ODI, 1993). These approaches seek to reduce communities' dependency on donor-supported programmes while understanding and making use of the communities' resources and capacities needed to escape poverty on a sustainable basis. Other scholars' arguments support a process of community participation where community members have more input in development geared at benefitting them (Kingsbury et al., 2004).

2.6.6 Social capital theory

In addition to the Capability Approach, this study also employs the social capital theory as another wellbeing theory with potential to explain some of the study's findings. Social capital originates from Emile Durkheim's work of 1901 through his work when he identified a link between suicide rates and the level of social integration (Durkheim, 1893/1964). Durkheim found that the level that an individual felt connected or accepted in society determined suicide rates. Some of the factors of integration that were found to influence suicide include low levels of integration, lack of religious affiliation, marital status (the unmarried individuals were more likely to commit suicide) and wealth status. This theory has however become popularised especially in the field of improvement of health through the work of such scholars Pierre Bourdieu, James Coleman and Robert Putnam (Bourdieu, 1986; Coleman, 1988; Putnam, 1995). The theory has recently become quite popular in explaining the differences in health outcomes given social resources. Social capital is generally accepted as an asset with potential to link as well as explain the various factors that may influence health and wellbeing outcomes.

This study applies concepts of social capital particularly in explaining the perceptions of development and poverty as articulated by those responding in this study. Results from Chapter 4 of this study show that family relationships (marital status), education level and household wealth as some of the factors considered to be indicators of development.

2.6.7 Gender and Development approaches

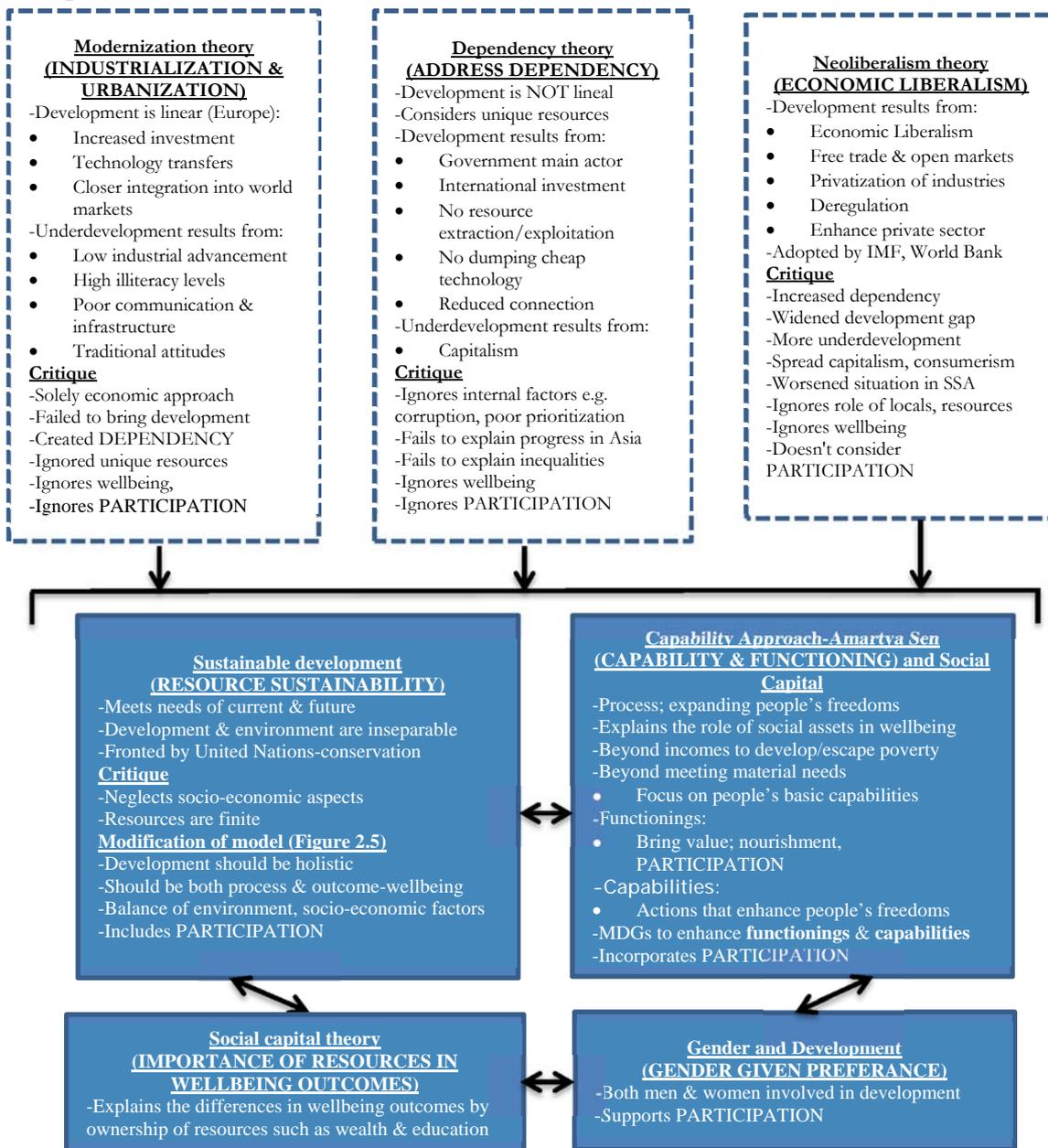
This thesis is also guided by some gender and development theories where emphasis is placed on the planning and implementation of development from a gender perspective (Moser, 1993). The first approach is the Gender and Development (GAD) theory proposed by Caroline Moser, whose approach to gender planning was informed by the previously unrecognised role of women in development matters, their subordination to men and their systemic exclusion from development matters (Moser, 1993). Her GAD theoretical approach in development was therefore geared towards improving the involvement of women in development matters through their empowerment in regards to control of resources, and decision-making at the household, community and national levels (Moser, 1993). Evolving from the Gender and Development approach emerged the Women in Development (WID) approach proposed in the early 1970s, and which called for the incorporation of both men and women in development. The Women in Development approach made a good argument for the inclusion of women in development as an untapped resource who, if involved in development matters have potential to provide an economic contribution to development (Overholt, Anderson, Cloud, & Austin, 1984). It was however criticised for ignoring the social processes through which this involvement happens (Oakley, 1972), a gap that the Gender and Development approach sought to address by emphasizing the involvement of both gender in development and by also focusing on the factors influencing the participation of both men and women in development matters.

2.6.8 A summary of theoretical approaches to development

This study employs the overarching theoretical framework (Figure 2.6) which is a summary of the neo-classical approaches to development, their weaknesses and eventually settles on three suitable ones that are used together and which support participatory development. The first three development approaches/theories include the modernization theory of development, the dependency theory of development and the neoliberalism theory of development. While the weaknesses of these three theoretical approaches are articulated in

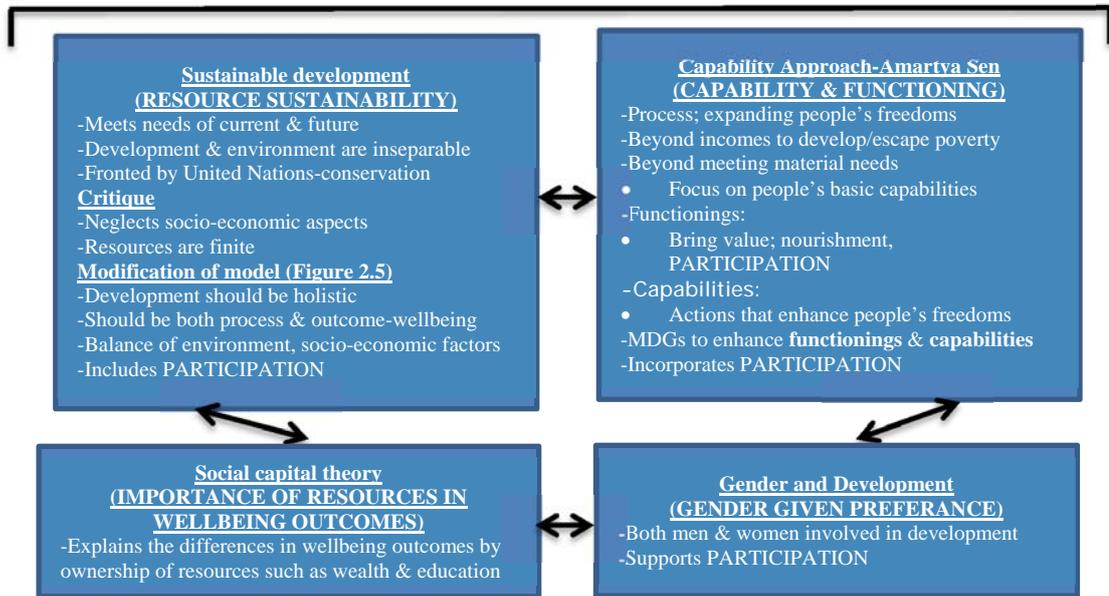
Figure 2.6 and section 2.6, their contribution to most current and more sustainable approaches to development is also recognised (Figure 2.6). The three theories indeed influence the current approaches to development. Modernization theory for instance is still applied in current development initiatives, in such areas as access to education, electricity, roads; the dependency theory shows that in some ways, development communities are unable to develop without the help of external institutions for instance through funding. The neo-liberalism approach to development also influences current approaches and measurements of development through such things as ensuring that developing countries have more expanded and liberal economies and free trade in order to effectively compete in the global market. The section summarises the main tenets of these theories, highlights their weaknesses, showing their unsuitability for this study and eventually settles on three more suitable ones. The four eventual ones adopted in the study include a modified Sustainable Development approach, the Capability Approach, Social capital theory and the Gender and Development approach (Figure 2.7). These approaches are most suitable as they are likely to help achieve sustainable development by incorporating various factors, including participatory development where both men and women are involved in the planning, implementation and monitoring of development initiatives. This participatory approach has potential to both achieve sustainable development while at the same time improving wellbeing and capabilities.

Figure 2.6: The theoretical framework adopted in the study: a summary of approaches to development



Source: A review of the development theories and approaches

Figure 2.7: Study's theoretical framework: the best approaches to development



Source: A review of the development theories and approaches

3 METHODOLOGY

3.6 Introduction

This study sought to understand rural community members' perspectives of development, the factors influencing these perceptions and the relationship between the perception of development and wellbeing, focusing on fertility. The research took place in Makueni County which is described in section 3.7. Specifically, the study sought to answer these research questions:

1. How do residents of a rural community understand “development”? What are the various aspects of development that are perceived to be important to them, at personal/household, community and national levels?
2. What socio-demographic, socio-economic, community and wellbeing factors influence the perceptions of development?
3. Are perceptions of development associated with wellbeing outcomes?

This chapter focuses on the methodology employed in answering these research questions. It presents information on the parent study on which the current study is perched, the geographical setting of the study, the study design, the study population, methods of data collection, the key concepts and variables, the data collected including data quality and the data analysis methods employed in the thesis.

3.7 Geographical setting

3.7.1 The Socio-Economic Impact Assessment of Rural Decentralised Off-grid Electricity Generation Schemes project

This PhD study perches onto a larger project being implemented by the University of Southampton's Schools of Civil Engineering and the Environment and Social Sciences in collaboration with Imperial College Business School in Kitonyoni and Mwanja sub-locations of Makueni County. This project namely, Socio-Economic Impact Assessment of Rural Decentralised Off-grid Electricity Generation Schemes in Rural Kenya seeks to design and implement off-grid electricity schemes to test the feasibility of providing such electricity, in rural villages in developing countries, with Kenya being used as a pilot site. As part of the

assessment of the feasibility of this scheme, the project endeavours to carry out an assessment of appropriate business models that can enable the scheme to be replicated in other rural villages in Africa. Further, the assessment of the potential for the project to impact the community's wellbeing is undertaken using three evaluations.

The feasibility of this electricity project is informed by evidence indicating that sustainable energy systems from such sources as solar, wind, biomass or water can be harnessed to improve human wellbeing and thereby contribute to the United Nations Millennium Development Goals (MDGs) of alleviating poverty (MDG 1), promoting wellbeing (MDGs 4, 5, 6), and environmental sustainability (MDG 7). Such off-grid rural electrification schemes can in addition be used to provide energy sources to isolated communities for lighting, milling of grain, micro-irrigation and refrigeration in homes and health facilities. This project has thus been designing off-grid electricity systems, implementing them, and evaluating their socio-economic impact on the wellbeing and economic status of rural communities where it is implemented. The main areas of impact that are under focus are hinged on some of the United Nations Millennium Development Goals including poverty, nutrition, maternal, and child health. The electricity project's assessment thus consists of three evaluation phases: a needs assessment conducted at the start of the project, a household baseline survey conducted prior to implementation of the electricity scheme and a household endline evaluation conducted at the end of the scheme.

The needs assessment was conducted at the start of the project and after the selection of potential implementation sites in September 2010. The main aim was to assess the suitability and feasibility of implementing the project in the selected sites as well as establishing the possible off-grid models to adopt based on the environment. The household baseline survey on the other hand was conducted prior to the implementation of the scheme (in March-May 2011) to collect baseline information on health and wellbeing, while the endline survey was conducted about 9 months from the implementation of the electricity scheme (in June-August 2014) to assess the impact of the project. The general objectives of these assessments include:

- 1) To quantify the impact of having electricity in the community on household economic status (measured by income and other measures of wellbeing).

- 2) To assess the impact of electrification in the community on health and wellbeing of mothers and their children.
- 3) To assess the impact of electrification in the community on other aspects of wellbeing including schooling and business opportunities.
- 4) To identify appropriate business models for sustained supply of electricity in the communities.
- 5) To find out how best to replicate the scheme to other villages in Kenya and other African countries.

The selection of Kitonyoni and Mwanja sub-locations was based on the analysis conducted using data on Kenya's administrative boundaries, electrical distribution network, planned extension of the electrical distribution network, existing centralised power stations, Kenya's population, mobile telephone coverage, health-facility coverage, and poverty data. These analyses guided the selection process. The selected sub-locations had to meet the following criteria:

- Have potential to have maximum benefit from the project. This criteria was defined using this formula: $\text{Benefit} = \text{Distance from grid or DPS} \times \text{Population density}$. The sites were to be located far enough from the main grid in order to eliminate pollution from the country's main electricity grid. At the same time they were to be reasonably populated in order to maximize the number of people to whom the results of the scheme would apply.
- Be located in areas where there is high potential for replication of a successful electrification project
- Be in the rural part of Kenya
- Not be connected to main electricity grid of the Kenya Power and Lighting Company (KPLC) and must not be in the Kenya Rural Electrification Authority (REA) plans for electrification in the near future (5 years of the project).
- Have a school, health facility and a trading centre.

Data for the needs assessment was collected using focus group discussions with community members, key informant interviews with community leaders and observation of community activities and livelihoods. Both qualitative and quantitative data were collected during the baseline and endline surveys. The qualitative data collected in the baseline and endline survey was done using focus group discussions and key informant interviews. The data focused on livelihoods, leisure activities, challenges faced in the community, perceptions of importance of electricity as well as the best possible electricity schemes that could suit the available resources and needs. These two surveys entailed conducting a census of all the 1068 households in the two sub-locations; 479 in Kitonyoni and 589 in Mwanja. These data collected at the household level focused on food consumption, purchases, household membership, autonomy, child and women's nutrition, birth histories, delivery and antenatal care, child morbidity and health-seeking practices and vaccination.

All the three socio-economic assessments of the electricity project were conducted in both sub-locations. However, being an experimental project, the electricity project was only implemented in Kitonyoni sub-location while Mwanja served as a control site.

3.7.2 Perceptions of development PhD study

This study uses data collected at three time points including September 2010 (in Kitonyoni and Mwanja sub-locations), March-May 2011 (in Kitonyoni sub-location only) and October-December 2012 (in Kitonyoni sub-location only). These two sub-locations constitute the sites where the Socio-Economic Impact Assessment of Rural Decentralised Off-grid Electricity Generation Schemes project is being implemented.

The data used in thesis therefore vary, for instance chapter 4 uses the data collected in both sub-locations in September 2010, March-May 2011 and October-December 2012 while those used in chapters 5 and 6 were only collected in Kitonyoni in March-May 2011 and October-December 2012. This perceptions project perched on the electricity project and took advantage of the already established networks with the study community to collect data for the PhD, investigating perceptions of development. This perceptions of development study also uses some of the household data collected in the electricity project's baseline survey. The specific data from the baseline survey used in this study include information on household assets which is used to compute wealth quintiles for analyses of chapters 5 & 6. In addition household income and demographic information about members of households

listed in the 290 sampled households in Kitonyoni was merged with data collected in the perceptions study (October-December 2012) and used in the analysis. The qualitative data used in chapter 4 was collected from both Kitonyoni and Mwanja sub-locations at the time the needs assessment was conducted, in September 2010, although this was a separate assessment from the needs assessment. These qualitative data, in addition to forming most of the analysis for chapter 4, also informed the questions asked during the bigger household perceptions study implemented in October-December 2012. The data collected during this period (October-December 2012) was however only done in Kitonyoni sub-location, being the electricity project's implementation site where the project was ongoing at the time of this data collection, a situation that made the exercise much easier. The additional perceptions of development data collected focused on fertility and perceptions of fertility, contraceptive use and perceptions of development. Given that there were no data collected in Mwanja sub-location for the perceptions study, analyses in chapters 5 and 6 and the quantitative section of chapter 4 primarily use the data collected in the perceptions study for Kitonyoni sub-location only.

3.7.3 The study community

Makueni County, an area inhabited by the Akamba speaking people who are from the Bantu community. The Akamba community forms about 97% of the population of the County while the remaining 3% are people from other communities, who live mainly in the town areas of the district (Republic of Kenya, 2009). The Akamba people rely on farming as the primary means of livelihood and, like many other indigenous African communities, consider a family unit as a very important entity in their lives, because it is the basic unit of production, consumption, investment and insurance (Tiffen, Mortimore, & Gichuki, 1994). Although traditionally relying on farming as a means of livelihood, in the recent past however, the country in general and the Akamba people in particular, have been facing tough economic and social changes, necessitating a change in the means of livelihood. The Akamba people are now shifting from farming and are incorporating other means of livelihood, in particular migrant labour. A study conducted in Makueni County, which was then a district in 2000, indicated that about 26% of household members in the district have become non-residents, due to schooling, migrant labour and marriage with most migrants being husbands and sons (Nzioka, 2000).

The livelihood patterns in Makueni follow those of many other areas of the country. The main livelihood activities in Kenya revolve around agriculture, but some communities also practice pastoralism and trade and exchange. These activities, which are often geared towards accessing such necessities as food, water, shelter, clothing, health care and education, vary in the various regions of the country depending on climate, soil, access to markets, geographical location and altitudes (Otolo & Wakhungu, 2013). The challenge for adequate livelihoods in the country however results from the zoning of most of its land as arid or semi-arid (ASAL). About 80% of the land in Kenya lies either in the arid or semi-arid zones, mostly inhabited by pastoralists and agro-pastoralists (Kenya Ministry of Agriculture, 2010). This description of the country's agro-ecological zones indicates that this thesis's study area lies in one of the drier zones of the country, which receives annual rainfall of 300-600mm and where most livelihood activities include pastoralism, agro-pastoralism and mixed farming (Kenya Ministry of Agriculture, 2010). The high percentage of arid and semi-arid land in the country has been argued to be a challenge of food security, a common feature in Makueni County (Otolo & Wakhungu, 2013). Efforts to resolve this situation and improve food security in these ASAL areas thus aim to incorporate the use of new technology as well as seeking to improve infrastructure and ensure that the farming communities in these areas have ready markets for their agricultural produce in order to encourage productivity of the land (Otolo & Wakhungu, 2013).

The two sub-locations of study, like the rest of Makueni County, are semi-arid in nature, with minimal rainfall between November and December during which time the residents grow maize, beans, green grams, chickpeas, cowpeas and pigeon peas for subsistence since the main economic activities in the sub-locations include subsistence agriculture, beekeeping, small scale trade and subsistence goat farming (Oxfam, 2006). Being a semi-arid area, the study area is typified of acute food insecurity during the long dry spells contributing to high dependency of a large proportion of the population on government or donor food aid (GOK, 2006). Besides predominantly engaging in farming, some members of the community also practice beekeeping, small scale trade and subsistence goat, sheep and cattle farming (Oxfam, 2006). The minimal rainfall often results in constant food shortage such that the community has to often rely on government food aid (GOK, 2006). Being a semi-arid area, most of the households in the sub-location rely on water from streams, springs, wells or boreholes (Republic of Kenya, 2011b). Only a few households in the whole County (13.1%)

are connected to the country's main electricity grid while a majority (81.2%) use paraffin for lighting (Republic of Kenya, 2011a).

Kitonyoni sub-location is located about 27KM from the County headquarters at Wote and about 13KM from the closest town, Kathonzweni while Mwanja is located about 45KM from Wote and 34KM from Kathonzweni (Figure 3.2). Most residents of the community travel to either of the two towns for important purchases, businesses and to access referral health services from Makueni County hospital and Kathonzweni district hospital. As 95% of the roads in the community are untarred, the community is mainly served by dusty roads. The main means of transportation within the community are motorcycle taxis, while commutes to the two towns are done using mini buses which operate twice daily, in the mornings and evenings. The sub-location is not connected to the country's main electricity grid and households mainly rely on paraffin for lighting and firewood for cooking. There is no piped water serving homes and community members rely on water from boreholes, streams, rain and shallow wells. Access of health care is also challenging as the community is served by one level-5 dispensary which can only provide basic outpatient services. The contraceptive choices available from this facility are limited to pills and injectables, while those requiring storage in cold chains and surgical procedures to administer can only be accessed from Makueni and Kathonzweni facilities. The facility provides basic child health services including treatment for childhood illnesses such as coughs, malaria and diarrhoea as well as growth monitoring where children's weights and heights are taken and advice on nutrition given. Although basic vaccination services are often provided, the lack of electricity makes it difficult to provide consistent vaccination. This is because whenever the facility's LPG gas runs out, the vaccines are transferred to the nearest Kathonzweni facility, where community members are then referred. Like the rest of the sub-location, the facility is not connected to the country's main electricity grid. As a consequence of the difficult livelihoods and access of important infrastructure, health outcomes in the County are poor such that 41.9% of children aged below 5 years are stunted (KNBS & ICF Macro, 2010).

Development in the sub location is now handled by the county government of Makueni. This followed the enactment of the new constitution in 2010 where the governance system was devolved. Consequently, various development projects focusing on improving access to safe water, roads, health facilities, education, farming methods and information communication & technology have been undertaken by Makueni County government

(Mzalendo, 2014). Some projects, for instance, those on child health and fertility and reproductive health are implemented in collaboration with some non-governmental organizations. The focus on the County's fertility is especially important as it has one of the highest fertility rates in the country. Makueni County's fertility rate is 5.1 children per woman compared to the national figure of 4.6, while its contraceptive use is still quite slow, at 40% (KNBS & UNICEF, 2008).

The location of the two sub-locations where this study was conducted are indicated in Figures 3.1 and 3.2.

Figure 3.1: Map of study areas

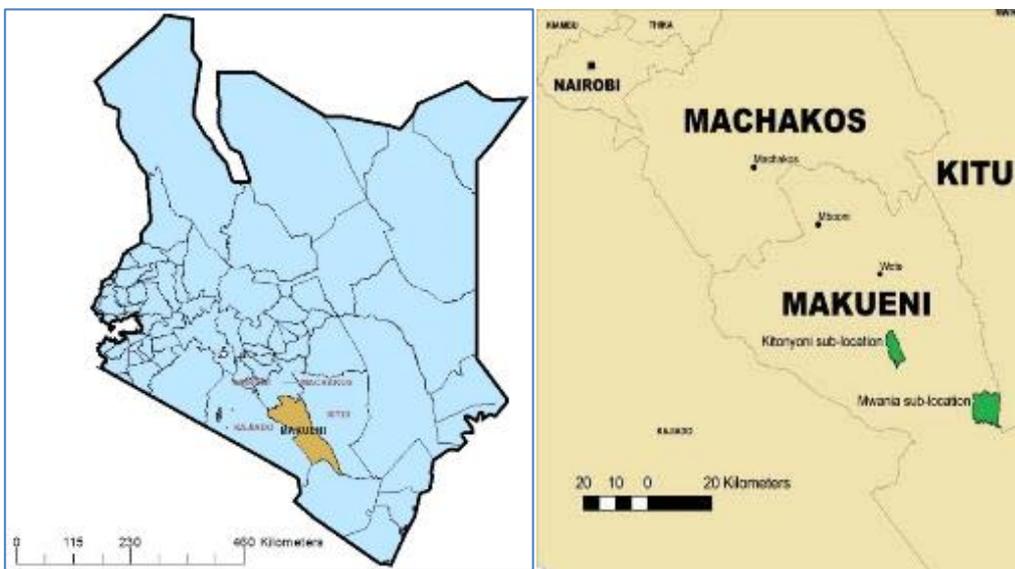


Figure 3.2: Map showing study areas and nearby towns



3.8 Measurement of key concepts

Figure 2.7 gives the theoretical framework used in this study. This framework, which is derived from the bigger framework (a summary of the theoretical approaches to development in Figure 2.6), narrows down to the best approaches to ensure sustainable development, one of which is participatory development. The framework guided the data to be collected and the data approaches employed in the study. The main aspects of this framework, which have potential to ensure sustainable development include:

1. Ensuring that development is holistic. This is best achieved through participatory development, such that all beneficiaries are involved in determining their needs, planning and monitoring development projects and providing locally available resources for development projects, which may include land, water, labour and indigenous ideas to sustaining the initiatives. To best involve people in development initiatives however, it is best to first seek to understand their perceptions of development, ranking of their needs and the best approaches to undertake in development. Such an undertaking has potential to help identify entry points and strategies thereby minimising wastage and consequently implementing only initiatives that are perceived to be most important for the beneficiaries.
2. Gender approach to development was considered in the approaches to data collection in this study. Both men and women's views of development were sought during data collection. The youth and community leaders were also interviewed in order to understand their perspectives of development.
3. An investigation into people's resources was done. Information on incomes, livelihoods, education and assets was collected and used in this analysis
4. To understand people's capabilities, their resources and health assessment was done. This framework also enabled an analysis of the main factors influencing the respondents' perceptions of development and relationship between these perceptions and health outcomes.

3.8.1 Definition of development and perceptions of development

This thesis adopts the United Nations Development Fund (UNDP)'s definition of development as the progressive act of making a better life for everyone, by meeting their basic needs, ensuring everyone has enough food to lead healthy lives, having a safe and healthy place to live, ensuring that everyone has affordable services and ensuring that everyone is treated with dignity and respect (United Nations Development Program, 2010c).

This definition captures the multidimensionality of development as posited by various scholars who view it as the improvement in the standard of living and the development of per capita income, as well as improvement in other non-economic factors (Ledwith, 1997; Sen, 1999, 2010; Szirmai, 2005; United Nations Development Program, 2010a, 2010c). This approach corresponds with the views of some recent scholars of development who view development as encompassing more than just an increase in income. They argue that income needs to be viewed as not the ultimate, rather as a means to development, whereby it facilitates the people's expansion of their choices enabling them to lead valuable, healthier and decent lives (Sen, 1999; United Nations Development Program, 2010c). Adopting this definition helps to investigate the respondents' perceptions of development in their context. The investigation began as an exploratory factor where respondents were allowed to freely mention factors that they considered important in development, after which they were investigated further using both qualitative and quantitative measures (Appendices 6-8). Understanding Makueni County residents' perceptions of development was informed by Chambers (2005)'s emphasis to revisit earlier approaches to development where the reality of those who development is intended for need be considered in development decisions and approaches, in order to ensure that there is equity and empowerment especially for the marginalised groups such as women, the poor and those in rural areas (Chambers, 2005, p. 190). Using such a participatory approach could be a step closer to sustainable development as it promises to ensure that development efforts are in sync with the beneficiaries' expectations.

3.8.1 Wellbeing

Wellbeing is used as a broader term that transcends the standard economic measures of development that rely on standard of living and income, to include other non-economic factors that enable a better understanding of the dynamics of socio-economic development

(Sen, 1999). These non-economic indicators, have potential to help understand better, and include capability-based indicators highlighted in other studies (Falkingham, 1999). These indicators range from those depicting the health of the population as well as its demographic and perceived factors that are used to gauge the population's future development expectations (Falkingham, 1999). One of the important indicators of wellbeing that have potential to offer a better understanding of Kenya's development status, which form a major focus of wellbeing in this study is therefore health, specifically focusing on fertility.

3.8.1.1 Definition of fertility

The two fertility measures used are; contraception and desired fertility. Contraception was defined as “Any deliberate parity-dependent practice including abstention and sterilization-undertaken to reduce the risk of conception” (Bongaarts, 1978, p. 107). Contraception on the other hand referred to use of any modern means of birth control. The modern methods include combined or progesterone only oral contraceptives (or the pill), combined or progestogen only injectables, implants, Intrauterine copper or hormonal devices, male and female condoms, male (vasectomy) and female (tubal ligation) sterilization, lactational amenorrhoea method and emergency contraception (World Health Organization, 2013a). In this study desired fertility was defined as the reported number of children that a respondent desired to have. This applied both to those with and without children. Those with children were asked to give their initial desired number of children before the start of their child-bearing. This variable was categorised into three; *1-3 children*, *4 children* and *5+ children*. No respondent indicated desire not to have any children. Contraception is a binary variable, categorised into *1. Yes*, if any method of contraception was used and *0. No* if no method of contraception was used.

Fertility was investigated as a measure of wellbeing in this study due to its important role in the contribution to population variations. It has been argued to be both a facilitator and beneficiary of development (Gilles, Perkins, Roemer, & Snodgrass, 1996) whereby uncontrolled population growth has been found to negatively impact development progress and poor development on the other hand also negatively impacts fertility (Ray, 1998; Todaro & Smith, 2006). While most developed countries can be said to have completed fertility transition with crude birth rates of below 20 and less than 1% of natural increase, many developing countries still grapple with high population growth rates (Population Reference Bureau, 2012). Currently, developing countries account for the greatest increase in

population growth worldwide, where crude birth rates are still high and where fertility decline has either stalled or is yet to happen and where most of the population is young thereby burdening the governments (Population Reference Bureau, 2012). In addition, many of the developing countries with high population increase are the poorest, facing such challenges as low incomes, high economic vulnerability, and poor human development indicators such as low life expectancy at birth, very low per capita income, and low levels of education. These factors indicate that uncontrolled population growth is thus an obstacle in the improvement of wellbeing (Haub, 2012). While some regions such as Asia have made the greatest effort in fertility decline, 33 of the 48 poorest countries experiencing high fertility are in sub-Saharan Africa, compounding the problem of provision of health, education, housing, infrastructure and employment opportunities (Haub, 2012). The region is further expected to contribute the greatest percentage increase of population globally by 2015, therefore necessitating an urgent need to mitigate this unprecedented increase especially since only 20% of married women in the region use a modern form of family planning, the lowest rate in the world (Population Reference Bureau, 2012).

Consequently, rapid population increase has been found to impact the achievement of sustainable development (Todaro & Smith, 2006). Todaro and Smith (2006) specifically view population and its impact on human welfare such as on incomes, health, education and general wellbeing as constituting the negative impacts of unprecedented population growth (Todaro & Smith, 2006). Uncontrolled and rapid population growth is also likely to impact people's capabilities and impact their goals of achieving sustainable development. Developing countries such as Kenya which face poor economic development specifically need to focus on issue of population growth. Indeed Kenya's population growth rate of 2.6% per annum is one of the highest around the world and if unchecked, it is likely to negatively impact the country's economic development progress.

Fertility therefore is one of the wellbeing issues under investigation in this study. It is investigated as both an indicator and an outcome of development since it is hypothesised that rapid population increase is likely to slow the gains of the economic development while at the same time standards of living have been argued to have an impact on fertility choices (Todaro & Smith, 2006). Incorporating fertility as an aspect of development is therefore important, especially in a developing context like Kenya where population growth rates continue to be on the rise. Currently, developing countries do account for the greatest

increase in population growth worldwide, where crude birth rates are still high and where fertility decline has either stalled or is yet to happen and where most of the population is young, putting a strain on the available resources (Population Reference Bureau, 2012). This therefore necessitates an urgent need to mitigate this unprecedented increase especially because its impacts on development are also far-reaching. As countries, governments and institutions work at enhancing sustainable development and improve wellbeing, efforts at limiting population growth need to be enhanced. To achieve sustainable development and improve wellbeing as proposed by the United Nation's millennium development goals, there is need to work at reducing population growth, as well as investing in universal health care including providing adequate reproductive health services as well as investment in education and gender equality (United Nations Population Fund, 2013). The United Nations Population Fund cites various ways in which sustainable development could be achieved with reduction in fertility.

Despite the potential for reduced fertility to spur economic growth (development) and improvement in wellbeing, a significant population of women in the reproductive age and who require contraception, do not use any. Those most affected reside in developing countries, including sub-Saharan Africa. The World Health Organization reports that about 222 million women in developing countries who report a desire to delay or stop child-bearing do not use any method of contraception (World Health Organization, 2013a). This gap exists despite the proved benefits including the potential of contraception to improve the women and children's wellbeing. Access to reliable and effective modern methods of contraception for instance, has been found to contribute to reduced abortion incidences, reduced maternal morbidity and mortality and reduced child morbidity and mortality and consequently a reduction of the burden of disease, all factors that can contribute to the development of the households, communities and countries (World Health Organization, 2013a). However, many women in developing countries continue to die because they lack access to contraception forcing them to either undertake unsafe abortions or putting their lives and those of the unborn babies at risk of maternal and new-born morbidity and mortality (UNFPA, 2013a). This study therefore attempts to show the link between perceptions of participatory development and fertility choices.

3.9 Study design

3.9.1 Data used in the thesis

This study uses various data sets for the three analysis chapters as described both below and in section 3.7. While the qualitative data was collected from respondents aged 18 years and above in the community, the quantitative data used in this chapter and the subsequent chapters did not include data collected from women and men aged over 49 years and 54 years respectively. This is because one of the main wellbeing variable of interest is fertility choices (contraceptive use and desired fertility). It was therefore not relevant to collect this data from those beyond the reproductive age. This exclusion does not negate the importance of the views of this group as their responses are captured and reported in the results of chapter 4.

- a. Chapter 4 attempts to answer research question number 1, which seeks to understand how residents of a rural community understand ‘development’ and their views of aspects of development considered important to them at the personal/household, community and national levels. To answer this question, the chapter uses both qualitative and quantitative data collected in the study using focus group discussions (FGDs), key informant interviews (KIIs) and household interviews (Table 4.1). The qualitative data is part of the thesis’s data collected in both Kitonyoni and Mwanja sub locations of Makueni County, Eastern Kenya. This data focused on understanding the community’s perceptions of poverty and development both at the community (using qualitative methods) and household (using quantitative data) levels. It was collected using focus group discussions from men, women and youth from both sub-locations and using key informant interviews from community leaders and those involved in development initiatives in the sub-locations or County in general (Table 4.1). The quantitative data was however only collected in Kitonyoni sub-location from the 290 households sampled and visited for interviews. This data was collected using questionnaires administered to people of reproductive age; men (18-54 years) and women (18-49 years).
- b. To answer research questions 2 and 3 in chapters 5 and 6 we use data collected only in the 290 households in Kitonyoni sub-location. These data were collected using questionnaires administered to the people of reproductive age; men (18-54 years) and

women (18-49 years). At the analysis stage, some household information collected in the electricity project's baseline survey including information on household income, demographic data of the household members and assets was merged with the perceptions data in order to provide background data for those interviewed in the perceptions study. Research question number 2 aims to investigate the factors influencing perceptions of development while number 3 looks into whether perceptions of participation in development influence wellbeing outcomes.

3.9.2 Mixed methodology

This study thus uses the mixed-methods approach to investigate Kitonyoni and Mwanja residents' perceptions of development and their wellbeing. Mixed methodology is a study design that focuses on collecting and analysing a mix of qualitative and quantitative data in order to best understand the issue being investigated (Creswell, 2003). It is the best approach to understand people's perception of development, the issues influencing perceptions of development and the link between perceptions of development and wellbeing. This approach involves collecting, analysing and mixing both quantitative and qualitative data as the assumption is that this mix provides a better understanding of the issue being investigated, compared to just using either a qualitative or quantitative approach (Creswell, 2008). This thesis employs this approach, that is, uses a combination of qualitative and quantitative methods and data as this gives a better understanding of the respondents' perspectives of development and the relationship of these perceptions with some select aspects of their wellbeing. The choice of this approach is informed by the multifaceted nature of the research topic and questions under investigation. To adequately assess and understand the perceptions of development, it was fit to use rigorous qualitative and quantitative approaches. Perceptions and wellbeing studies elsewhere have employed both approaches, either singularly or in combination (Akwara, Madise, & Hinde, 2003; Chepngeno-Langat, 2013; Essendi et al., 2014; Kovacs, 2000; Mwaseba et al., 2009). The wellbeing outcomes under focus in this study revolve around fertility, specifically use of contraception and desired fertility. These issues were investigated using quantitative approaches while perceptions of development were investigated using both qualitative and quantitative methods. Qualitative data was first used to collect data on how the community of study perceives development. This data was analysed and is reported in chapter 4. Later, quantitative questions were computed using results of this initial qualitative data. These questions were then administered

in a quantitative questionnaire, and thereafter, used to compute the perceptions indices used in chapters 5 and 6. Mixed methods approach is used at both the data collection and analysis stages.

This thesis focuses on two types of variables; perceived/subjective and objective variables. While the data on the perceived variables (perceptions of development) could best be captured using qualitative data, an attempt to use quantitative measures is also used to capture these perceptions. In addition, data on aspects of health and use of contraception were best captured using both subjective and objective measures. The analytical approach employed therefore focuses on both qualitative and quantitative data. The advantages that the quantitative methods used in this study have is that the results can be inferred to bigger populations while the qualitative approaches helped answer questions relating the 'whys' and 'how's in the investigation of perceptions of development (Hennink, Hutter, & Bailey, 2011).

3.9.1 Sample size determination:

To answer research questions 2 and 3 in chapters 5 and 6 respectively, quantitative data on perceptions of development was collected in Kitonyoni sub-location only from a sample of 290 households. Some of these data are also used for the bivariate analysis in chapter 4. This sample size was calculated based on the consideration that the parameter of interest in this study is the nutrition status, measured by the percentage of children who are stunted. Stunting is a measure of malnutrition calculated using a child's height/length and age whereby those having a height (or length)-for-age z-score more than 2 standard deviation below the median of the WHO/NCHS's set international reference, are considered to be stunted (World Health Organization, 2011). Although it is not used in the analysis, child nutrition was considered an important measure in this study since food security is an important aspect of development, which both demonstrates areas of need and can also be used to assess development-progress. While global reduction in hunger and poverty has the key to propel communities and countries to development, malnutrition, on the other hand, stands as a major barrier to both economic and social development as inadequate food supply means that the affected populations remain less productive economically and socially (United Nations, 2011b). Stunting as a measure of malnutrition is used in the sample size calculation in this study as it indicates a continuing process of growth-failure or chronic malnutrition, a

situation arising from a consistent lack of adequate food, which is an indicator of poor development or poor economic conditions (Sakisaka et al., 2006).

Sample size calculation

The sample size (n_0) was calculated using Cochran's sample size formula (Cochran, 1963).

The formula is:

$$n_0 = \frac{z_{\alpha/2}^2 (p \times q)}{e^2}$$

Where

$z_{\alpha/2}$ = Value for selected alpha level of .05 = 1.96.

P is the estimated proportion of an attribute that is present in the population, in this case this was estimated from the percentage of children in Eastern province who are stunted.

q is $1 - P$

e is the acceptable margin of error for proportion being estimated (error researcher is willing to accept).

Once the first stage of sampling was done, Cochran's (1977) correction formula was used to calculate the final sample size, because the population from which the sample is being drawn is known (Cochran, 1977). This formula is as follows:

$$n = \frac{n_0}{1 + \frac{n_0}{N}}$$

The sample:

Where $\alpha = 0.05$ at 95% confidence interval and the precision of the proportion is ± 0.04 about the population values of my parameter of interest. In addition, if we consider that the proportion of my parameter of interest was derived from the percentage of children in Eastern province who are stunted (this is 41.9%), $p=0.419$, the sample n_0 size is calculated as follows:

$$n_0 = \frac{(1.96)^2(0.419)(1-0.419)}{(0.04)^2} = 584$$

The estimation of the sample size n_0 is assuming we have an infinite population, but because our population had a finite size, we had to correct it using Cochran's (1977) correction formula. This correction was based on what is known about the population of the study area.

Given that the total population for Kitonyoni sub location using the household listing generated during the electricity project's baseline survey conducted in March-June 2011 is $N=522$, the finite population correction, was calculated as follows:

$$n = \frac{n_0}{1 + \frac{n_0}{N}} = n = \frac{584}{1 + \frac{584}{522}} = 275.63 = 276$$

276 was the selected sample size, but the sample needed to be adjusted further because of non-response of 5%. This non-response was derived from the findings of the Energy project's baseline survey for Kitonyoni sub-location. The sample, after adjusting for non-response was $276 / (1 - \text{nonresponse rate}) = (276 / .95) = 290$

Then sample size adjusted for non-response was **290**

Since the number of households to be visited had been determined and Kitonyoni sub-location comprises 12 villages⁴, this study used both stratified and simple random sampling techniques. Households were stratified by villages then samples drawn from the list of households in each village. Respondents in the household interviews were grouped into females and males of the reproductive age (18-49 years) and (18-54 years respectively). This distinction by gender was deemed important in this thesis as it has been hypothesized that women and men's perceptions of wellbeing vary because of the engendered roles assigned by society (Bristor & Fischer, 1993; Hayhoe & Wilhelm, 1998). Consequently, since the gender perspectives of the perceptions of development are a main focus of this study, it was

⁴ At the time of the Baseline Survey in March-May 2011, the sub location had 10 villages, but we incorporated an additional one, which bordered the sub location. By February 2012 (the E4D team visited the community), this village had been incorporated into the sub location. In addition, one other village (King'ang'i) was considered too big for proper administration and has since been split into two. This brings the total villages to 12

important to have both gender represented in the sample. Regarding the age group (respondent's age), age was given an important consideration since one of the factors of wellbeing being investigated is fertility and desired fertility, hence the need to limit the respondents to those in the reproductive age. In the sample strategy, villages were treated as strata from which a predetermined sample was drawn at random. The selected households were then visited where eligible household members were approached, their consent sought and then interviewed. Given the importance of gender in this study, interviews with male respondents were conducted in a half of all the households sampled while interviews with women comprised the remaining half. At the end of data collection total of 135 men (18-54 years old) and 140 women (18-49 years old) had been interviewed in Kitonyoni (Table 3.1).

For the qualitative data collected, a total of 36 FGDs were conducted in both Kitonyoni and Mwanja sub-locations (see Table 3.1). These data were collected in both sub-locations at the beginning of the electricity study. Those who participated in the FGDs were constituted based on age and gender, thereby having two youth groups (18-24 years), two men groups (25-40 years and 41 years and above) and two women groups (25-40 years and 41 years and above). These 12 FGDs ensured that the data from across the two sub location was representative along gender and age. In addition, two key informant interviews were conducted with community leaders in the two sub-locations, while another three were conducted with various government officials at the district level.

Qualitative data were coded in NVivo 8 software while the quantitative data was analysed using the IBM SPSS statistics version 20 and AMOS.

Table 3.1: Characteristics of respondents

Method & respondent	Age-category	No. of groups/individuals
Household interviews (Kitonyoni only)	18-54 year-old males	135
	18-49 year-old females	140
	Total household interviewees	294
FGD Women	18-24 years	6
FGD Women	25-40 years	6
FGD Women	41+ years	6
FGD Men	18-24 years	6
FGD Men	25-40 years	6
FGD Men	41+ years	6
KII community leader (Kitonyoni and Mwanja)	Adult	2
District development officials (Kitonyoni and Mwanja)	Adult	3

*All the FGDs were conducted in both Kitonyoni and Mwanja sub-locations

3.9.2 Tools of data collection

Data were collected at the community and household levels using focus group discussions (FGDs), key informant interviews and household interviews. Table 3.1 gives a summary of the study participants. Different approaches were used to select study participants where for instance, those participating in the FGDs and key informant interviews were approached in the community based on the demographic characteristics highlighted in Table 3.1. The purpose of the study was explained to these participants once approached where their consent to participate in the study was sought. Thereafter, an appointment was made to have the discussions or interviews at a later date. Between the first contact and the day of discussion, they were given the project's consent form (Appendices 6-9) to read further and revert to the researcher if in need of clarification. Key informants were approached at their offices where consent and an appointment for an interview were sort. The household questionnaires were used to collect information on health, demographic outcomes, socioeconomic outcomes and perceptions of development and perceptions of participation in community development. All the instruments, with the exception of the key informant interview guides were translated in the local language for the community (Kamba) for ease of understanding and also to avoid ambiguity, as well as to give participants confidence to engage in the study.

3.9.3 Data collection plan

Data collection was done in October 2012 in Kitonyoni and Mwanja sub-locations of Makueni County. Data collection for the survey was conducted in the homes of the respondents while the key informants were conducted at the places of work for the key informants. The FGDs on the other hand were conducted in a neutral place in Kitonyoni and Mwanja market places where respondents congregated for the discussions, whose mean time was 2 hours.

3.9.3.1 Questionnaire pre-testing

Once the questionnaires (Appendices 6-9) were prepared, they were pre-tested before the start of data collection was done. This was done in order to ensure that the pre-selected responses were valid and captured all the possible responses. This was especially important because the tools of data collected and the questions implemented in this study had yet to be applied in other studies, hence the need to check their content and consistency. In addition, since the data was collected in the local Kamba language (the language spoken by the residents of Makueni County) all the tools of data collection, with the exception of the KII guides, had to be translated. Pre-testing was therefore important in order to ensure that the translations were clear to the respondents and that the language of translation was the correct variant of the Kamba language as the wider Kamba region has various variants of the language spoken in different parts of the *Ukambani* region (Nzioka, 2000). The pre-test was conducted in a sub-location in Makueni County that was close enough to the study community and therefore similar in socio-economic characteristics, but far enough in order to avoid contamination of the study where information about the study would have leaked to the study community.

3.9.3.2 Data quality

The researcher ensured that data quality was adhered to during data collection through rigorous training and testing of the data collection skills that the data collection team held. In addition, the completed questionnaires were edited and checked by the researcher before data entry was done, upon which any inconsistencies were addressed within a span of two days of conducting the interviews. The researcher also carried out 50 random spot-checks with the help of the data collection team, in order to ensure that the data collected reflected

the reality of the interviewees' responses. In 20 randomly selected cases, complete interviews were redone with the same respondent to check the accuracy of the data. Regular meetings between the researcher and the data collection team were also conducted in order to understand and address any issues arising from the data collection process and which would likely impact the quality of the data.

3.9.3.3 Response rate

The sample number of respondents in this study was 290 but 294 people were interviewed, indicating a response rate to be 100%. The success in the response rate in the study was ensured through the various measures employed in the study. Part of the training on data collection focused on training on creation of rapport in order to minimise the chances of refusals in the interviews. In addition, having Kamba-speaking data collection team helped ensure the respondents' confidence and therefore improvement in the response rate. The team was also expected to make up to three visits to the respondents' homes if they missed them. Further, considering the economic activities where most members of the villages visited for the interviews engaged in small scale farming activities and trade, the data collection team was advised to make visits either early in the morning or later in the afternoon in order to increase chances of getting a positive response of an interview.

3.9.4 Research and ethical approval

Ethical approval for this study was obtained from the University of Southampton, social sciences' ethics committee. In addition, before data collection was done, research permit was sought from and issued by the National Council for Science and Technology of the Ministry of Education, Science and Technology (Appendices 4 and 5).

3.9.5 Informed consent

One of the requirements of research ethics is that informed consent be obtained from respondents before an interview or a discussion is conducted. The informed consent in this study was administered differently depending on the data being collected. Clearance for the research from the ethics committees at the University of Southampton and in Kenya was given on the basis that informed consent would be obtained prior to interviewing respondents. In order for this consent to be given, it was important to give the respondents

all the information pertaining to the study so they could make an informed decision, agreeing or disagreeing to participate in the study. Before the interviews or discussions were conducted the data collection team sought to explain their purpose of visit and study, the procedures involved in the study, including how respondents were selected and identified, assuring the respondents that no harm would happen to them as a result of participating in the study. In addition, any potential benefits of engaging in the study were articulated, which mainly revolved around using the data collected to inform policy makers, researchers and scholars on development issues affecting the community. They were also assured of their confidentiality in participating in the study as well as emphasizing to them regarding the voluntary nature of their participation. Finally the consent forms containing all this information and contact details of the ethics body was given to the respondents to ensure that they knew where to report any violation of their rights, if needed. Those who agreed to participate in the study were asked to sign consent forms indicating this willingness. Those who were unable to sign due to the inability to write put a finger print in the place of the signature.

3.9.5 Confidentiality

All the potential respondents in the study were assured that their responses would be confidential, and that the data would not be shared with others and in cases where this was necessary, the data would be stripped of all identifiers, including names, villages and sub-locations as well as designations (for the key informant). All the key identifiers of the respondents were also stripped when reporting the analysis in the thesis and in the paper forming this thesis. Where quotes from the qualitative data were used in the thesis and in the papers, codes were used to denote these respondents. During data collection, confidentiality was maintained where respondents were interviewed out of the ear-shot of others. The data collection team was also not allowed to discuss the interviews and respondents with other respondents, community leaders or among themselves.

3.10 Study population

The areas of study are areas where the University of Southampton, in conjunction with other partners are conducting an electricity project titled “Socio-economic Impact Assessment of Rural Decentralised off-grid Electricity Generation Schemes in rural Kenya”. The team has been gathering data in Kitonyoni and Mwanja sub-locations, so this project uses some of the

infrastructures and relationships established in this larger project, which had ethical approval from the University of Southampton Ethics Committee as well as from an accredited Ethics Committee in Kenya (Appendices 1 and 2). Using these infrastructures, the researcher's entry point to the community was through the Chief/ Assistant Chief's office. Here the leaders were informed of the intention to conduct the new study in their sub locations, following which, their permission was sought and once granted, the researcher started mobilizing those to participate in the study. This study got ethical approval from the University of Southampton's Ethics Committee (Appendix 3). A research permit to conduct the study was also sought and granted from the National Council for Science and Technology in Kenya (Appendices 4 and 5).

For the household interviews, all the households in each village were selected and households to be visited sampled. The researcher used stratified and simple random sampling to select households to be visited using a sampling frame consisting of a list of all households in the two sub-locations listed during the Energy Project's baseline survey, conducted in March-May 2011. Once the household to be visited were sampled, a team of researchers trained to conduct the data collection then visited these households, where eligible household members were approached, their consent sought and then interviewed. The household interviews and focus group discussions were conducted in the local Kamba language in order to allow respondents to freely express themselves. The researchers collecting this data therefore had to be speakers of Kamba, the local language.

3.11 Methods of data collection

A combination of both qualitative and quantitative methods was used in this research, including, questionnaires, focus group discussions (FGDs) and key informant interviews (KIIs).

3.11.1 Qualitative methods

The FGDs and KIIs interviews were conducted with community members in both Kitonyoni and Mwanja sub-locations to understand their perception of development at the qualitative level.

Focus Group Discussions: these were conducted with community members and the groups were constituted based on gender and age.

Key Informant interviews: These were conducted with community leaders in the two sub-locations of study. In addition key informant interviews were conducted with officials at Makueni district engaged in development projects at the districts including those from the district development office, the environment office and the gender and social development office.

3.11.2 Quantitative methods

Household interviews were conducted where a questionnaire containing a set of questions on perceptions of development were administered. This study uses some of the data on household characteristics collected in the Socio-economic Impact Assessment of Rural Decentralised off-grid Electricity Generation Schemes in rural Kenya project (see Appendix 9 for questionnaire used in this study). Respondents included the household head (for the household characteristics questions) and other individuals at the household (including women aged 18-49 and men aged 18-54 years). These questions were informed by the literature review conducted.

3.12 Key measurement concepts and variables

The areas of focus for both qualitative and quantitative data collection included:

1. The respondents' understanding of development and various dimensions that they consider important for them at personal/household, community and national levels. This data was collected using both qualitative and quantitative methods
2. The socio-demographic and wellbeing factors influencing the perceptions of development. This data was collected using quantitative methods
3. The relationship between the perceptions of development and wellbeing, specifically focusing on fertility. This quantitative data was collected using questionnaires.

3.13 Methods of data analysis

3.13.1 Quantitative data analysis methods

The methods of analysis of the quantitative data employed in this study are cross-sectional. To answer research question number 1 in chapter 4, descriptive statistics was used to show the distribution and frequency of responses. This research question was focused on

understanding how residents of a rural community understand “development” and the various aspects of development that they consider to be important to them at three levels; personal/household, community and national levels. In the same chapter, bivariate analysis has been used to examine relationship between some of the variables in the analysis where the chi-square test was used to investigate the independence of the variables. Structural equation modelling techniques are used to model the relationship between perception of development and socio-economic, demographic and wellbeing factors in chapter 5. This chapter answers research question number 2 which examined the socio-economic, socio-demographic and wellbeing factors influencing how residents of this study community perceive development. The approach is used because of the latent nature of the perceptions of development variable. Binary logistic regression as well as multinomial logistic regression analyses were applied in chapter 6 to assess the relationship between perceptions of development and health outcomes. This chapter seeks to answer research question number 3, which attempts to assess whether perceptions of development are associated with wellbeing outcomes, specifically, fertility choices. These statistical methods are further explained below:

3.13.1.1 Chi-square test

Chapter 4 employed the use of chi-squared tests (χ^2) of independence to test the association between variables (Diamond & Jefferies, 2001). This test was done to assess the null hypothesis that there is no association between two variables.

The formula for the chi-square test statistic is:

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where O=observed values and E=expected values

To determine the significance of the chi-square test statistics, the computed value is further compared to the critical value in the chi-square distribution table. The values in the chi-square distribution table are based on the set level of significance and the number of degrees of freedom, which is the number of categories minus 1. Finally, the null hypothesis may be rejected if the test statistic is greater than the critical value. The alternative hypothesis, stating the presence of a relationship between the two variables of interest is thus accepted.

3.13.1.2 Logistic regression analysis

Logistic regression analysis is used in part of the analysis in chapter 6 to model the relationship between a dependent and one or more independent variables, where the dependent variable is dichotomous. It varies with linear regression whereby, although its logit coefficients have the same presentations as linear regression's coefficients, it however does not assume a linear relationship between the dependent and the independent variables. This study could therefore have used linear regression analysis, however this would have required that we assume that the data have a linear distribution. The outcome variable of interest in this study was however dichotomous, having two outcomes, either 'yes' or 'no'. Just like with linear regression analysis, logistic regression enables a researcher to examine the fit of the model and the significance of the relationships between the dependent and independent variable of interest. Logistic regression predicts the probability of an event occurring and the dependent variable is first converted into a logit variable, that is the natural log of the odds of an event occurring, in this case the dependent variable. *Logit(p)* is the log (to base e) of the *odds ratio or likelihood ratio* that the dependent variable is 1. It is defined as:

$$\log\left(\frac{P}{1-P}\right) = a + b_1x_1 + b_2x_2 + \dots + b_jx_j$$

Logistic regression analysis uses the maximum likelihood estimation to estimate the coefficients, by maximising the log likelihood that the observed values of the dependent variable may be estimated using the observed values of the independent variables. Repeated estimation where an iterative process that starts with a tentative solution and revises it as appropriate, until there is an improvement and where there is convergence at which point the log likelihood does not change significantly, is therefore used.

3.13.1.3 Multinomial logistic regression analysis

Multinomial logistic regression, also known as multinomial logit, used in the second part of the analysis in chapter 6, is similar to the logistic regression analysis, although it allows for more than two discrete outcomes in the dependent variable. While logistic regression analysis predicts the probability of an event occurring, multinomial logit predicts the probabilities of the different possible outcomes of the dependent variable (with more than two nominal categories), given a set of independent variables. The dependent variable in multinomial regression is nominal, that is, the categories are equivalent and that are not ordered in any

meaningful categories. This analysis operates in the same way as logistic regression, that is, uses the same formula. The only difference being that the analysis breaks the dependent variable down into a series of comparisons between two categories (Field, 2009).

This second analysis in chapter 6 would therefore have used logistic regression, however this approach is limited to predicting the probability of one event occurring (yes or no outcomes), while the present study investigated the possibility of having more than one outcome, that is, the probability that the respondents in this study would desire to have; 1-3 children; 4 children or; 5+ children. While this is an ordered variable, I use multinomial logit because the variable is desired family size, rather than attained.

3.13.1.4 Structural equation modelling

Structural equation modeling (SEM) is a statistical technique that integrates a number of different multivariate techniques into one model fitting process. It is used in chapter 5 to model the relationship between perception of development and socio-economic, demographic and perceived factors. The analytical approach has been defined as a combination of statistical techniques such as exploratory factor analysis and multiple regression, that examines a set of relationships between one or more Independent Variables and one or more Dependent Variables (Nokelainen, 1999). The technique endeavours to test and estimate causal relations using a combination of statistical data and qualitative causal assumptions and techniques, including:

1. Measurement theory;
2. Factor analysis
3. Regression
4. Simultaneous equation modeling and
5. Path analysis

The approach, defined by various scholars including Wright (1921), articulated the use of structural equation models in either the testing or development of theories (Wright, 1921). It has two main approaches; confirmatory factor analysis and path analysis. Factor analysis handles all variables, whether observed or not observed or those that elude direct measurement in the social world (latent variables) (Byrne, 2010).

Chapter 5 employs perception of development as a latent variable since it is complex and multifaceted, thereby requiring a use of multiple indicators/measures since a single measure would not be adequate in covering the full concept of the variable. SEM was therefore the best analytical approach to use in this chapter since the methodology is able to provide the analysis estimates and coefficients of this complex latent construction while at the same time taking care of errors that also influence the variances of the observable indicators (Byrne, 2010). Latent variable is based on the classical test theory, which assumes the presence of two variables in each measure, that is, the true score and error variation (Lord & Novick, 1968; Lumsden, 1976; Traub, 1997). The true score and measurement error for an observable indicator used to compute a latent variable can thus be expressed as:

$$X = t + e$$

Where X is observed score of the item, t is the true score or true point on the measurement scale at time of interview and e is the error variation. The equation is however unidentified with one indicator, necessitating the need for multiple indicators for each latent variable. Factor analysis is therefore employed at this stage where multiple indicators are used in order to estimate the true score and error parameters. Factor analysis transforms correlated observed variables into uncorrelated components whereby a subset of these components can thus be used to summarise the observed relationships of the variables forming the latent variable. SEM factors analysis can either be exploratory when the researcher does not have a pre-defined idea of the possible set of variables or confirmatory, where a specific hypothesis about the structure and number of dimensions underlying a set of variables (in this case, variables defining the latent variable) is known (Suhr, 2009; Wright, 1921).

The analysis in chapter 5 could have employed the use of multiple regression analysis. However this was not suitable for this study. Multiple regression analysis techniques are used to assess the relationships between measurable constructs and therefore the method was unsuitable for the current analysis as the main outcome variable (perception of development) is not a directly measurable variable, rather, it is computed using a set of measurable variables.

3.13.2 Qualitative data analysis methods

The qualitative data employed in this study was analysed using the thematic theory approach which involves the discovery of a theory based on analysis of data. As recommended by Hennink et al (2011), the researcher allowed respondents to mention, discuss and deliberate

on the emerging issues and in some instance reach a consensus amongst themselves on the factors considered to mean/indicate personal, community and national development (Hennink et al., 2011). The data was first transcribed and translated from the Kamba language to English before being imported into the NVivo package of data analysis from QSR. This software allows the coding and analysis of qualitative data. Once the data were imported into NVivo, cross-sectional and categorical coding was done in order to allow for the retrieval of the main ideas arising in the data. Afterwards, further analysis involving the synthesis of the data into themes or meaningful phenomena which was further summarised and presented as text and quotes in the thesis was done.

4 PERCEPTIONS OF DEVELOPMENT BY RESIDENTS OF A RURAL COMMUNITY IN KENYA

4.6 Abstract

Despite the acknowledgment that participatory approaches in development have potential in understanding and designing development programmes and policies, perceptions about poverty and development continue to be dominated by those who are considered to be non-poor, including the professionals, and other development agents. Using data collected from residents of Makueni district (now Makueni County) of Eastern Kenya, this paper seeks to reverse this approach by involving Makueni community members in the conceptualization of poverty and development in their context and outlining possible strategies to address these two issues. The study finds that definitions of poverty and development and strategies to address them are multidimensional and go beyond the monetary measures. These definitions also vary according to context. The study recommends that strategies to address poverty and development should encompass both monetary and non-monetary measures and be contextually-tailored.

Key words: Poverty, development, rural poor, perceptions, Kenya

4.7 Introduction

The importance of going beyond the neo-classical approaches as being key in development specifically, the standard of living and income, in recent development studies is increasingly becoming important. There is however need to also recognise the importance of non-monetary factors which are crucial particularly in seeking to understand the dynamics of socio-economic development and poverty (Laderchi, Saith, & Stewart, 2003; Ledwith, 1997; Sen, 1999, 2010; Szirmai, 2005). These non-monetary approaches view development as a multi-dimensional issue and include various measurement approaches, including using both qualitative and quantitative measures that go beyond the conventional measures of using income and expenditure as the only assessors of development progress (Alkire, Roche, & Sumner, 2013; KIPPRA, 2004; Laderchi, 1997; Laderchi et al., 2003; McKinley, 1997; United Nations Development Program, 2010b).

Based on these approaches, one key aspect in the efforts to reduce poverty and to advance development is the involvement of other development actors in development efforts, most notably the beneficiaries of development efforts, an approach that is however still rarely applied. Participation in development, which entails enlarging the capacity of the socially and economically marginalized peoples and involving them in decision making over their own lives is rarely sought, especially in development and poverty reduction efforts implemented in developing countries (Chambers, 2005; Guijt & Shah, 1998; Sen, 1999). Yet, it has been advanced as an approach that holds great potential in ensuring faster and more sustainable outcomes as it helps understand communities' felt needs thereby helping prioritise them in development initiatives (Chambers, 1983, 2005). There is therefore a need to revisit such approaches, since many communities in developing countries, especially those in the rural areas, continue to experience poverty, stagnated development and poor wellbeing outcomes (Fotso, 2006; Sahn & Sahn, 2004; Smith et al., 2004).

In Kenya, there exist high poverty levels and unequal development between regions and between rural and urban areas (Alwy & Schech, 2007; IFAD, 2010; Muhula, 2009; World Bank, 2009). Yet, very few of the development initiatives implemented incorporate participatory development where the views of community members are sought in order to prioritise their needs (Republic of Kenya, 2011a, 2011c, 2011d). Where this approach has been used, this has either been incomplete or has been applied at a macro level, disregarding the cultural and geographic variations between the regions of the country. Consequently, development inequalities can be observed not just between regions, but also within regions and between the rural and urban areas of the country. Makueni district, for instance, is reported to be one of the poorest in Eastern province and in the country (73.5% of households are poor) (National Coordinating Agency for Population and Development, 2005). The district is also reported as making the highest contribution to the national poverty level (5.1%) compared to other districts in Eastern province where it lies, at: Nithi (4.5%), Kitui Central (4.4%), Mbooni (4.2%), Kangundo (4.2%), Kibwezi (4%), Igembe (3.9%), Mwingi North (3.9%), Mwala (3.7%), and Machakos Town (3.6%). These dynamics support the need to consider the context when planning and implementing poverty reduction and community development projects.

This chapter attempts to demonstrate the importance of involving development beneficiaries in the determination of their needs with the aim of prioritizing these needs. This is expected

to show that development is best approached contextually. The paper seeks to answer the first research question in this thesis which is; How do residents of Makueni County understand “development”?; What are the various aspects of development that are perceived to be important to Makueni residents at individual, household and community levels? To do this, the paper employs the United Nations’ definition of ‘development’ as a process of enlarging people's choices with the most critical choices entailing a long and healthy life, acquiring knowledge and enjoying a decent standard of living. It outlines the other choices to include political freedom, guarantee of human rights and self-respect (United Nations Development Program, 2010c). The approach of ‘development’ used in this paper incorporates its multi-faceted nature that encompasses economic, social, political, cultural and environmental factors. Both the economic and non-economic indicators are applied in this study, for instance, appreciating general wellbeing factors such as health, autonomy and nutrition, education, housing, water, community services, transport and participation (in development) and governance (Bahemuka, Nganda, Nzioka, Gakuru, & Njeru, 1998; Republic of Kenya, 1979).

Using a participatory approach to development, this study seeks to understand how residents of Kitonyoni and Mwanja sub locations in Makueni perceive poverty and development at the personal/household, community and at national levels. ‘Participation’ or ‘participatory development’ is defined in this study as a methodology where the capacity of the socially and economically marginalised is enlarged and their involvement in decision making over their own lives is sought (Chambers, 2005; Guijt & Shah, 1998; Sen, 1999). The study further investigates the community’s ranking of development needs. It uses the term ‘community’, whose definition is borrowed from MacQueen et al (2001)’s 2001 study among respondents in the US. In the study, diverse members of US communities commonly defined a community as “...a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings” (MacQueen et al., 2001). Regarding the definition of poverty and well-being, this study sheds earlier assumptions arising from measuring poverty using a uni-dimensional monetary measure (income and expenditure) since this is not adequate in capturing this broad variable. This study thus incorporates a multidimensional concept of wellbeing whereby those responding in the study define poverty much broadly in their context using various measures, including health, wealth, satisfaction, happiness and psychological wellbeing (Frey & Stutzer, 2002; A. Sen,

1985). Finally, data on perceptions of poverty and an outline of the link between poverty and development as perceived by the study's respondents is presented.

4.8 Methods

4.8.1 Study area and population

Data used in this chapter is part of the thesis's data collected in Kitonyoni and Mwanja sub locations of Kathonzweni district in Makueni County⁵, Eastern Kenya.

Data collection

The chapter uses both qualitative and quantitative data collected in the study using focus group discussions (FGDs), key informant interviews (KIIs) and household interviews (Table 4.1) to answer research question number 1. The qualitative data is part of the thesis's data collected in both Kitonyoni and Mwanja sub locations of Makueni County, Eastern Kenya. It was collected using focus group discussions from men, women and youth from both sub-locations and key informant interviews from community leaders and those involved in development initiatives in the sub-locations or County (Table 4.1). The quantitative data on the other hand was however only collected in Kitonyoni sub-location from a total of 294 individuals in the 290 sampled households. In this study, a household constituted people who usually pull their resources together, including income, and who usually cook together. This data was collected using questionnaires administered to people of reproductive age; men (18-54 years) and women (18-49 years). These male and female respondents were selected and interviewed in each household alternately.

A question on the respondents' understanding of development was administered to them, in the quantitative data collection. The question asked at the household was "*What is development?*" translated into and asked to the respondents in the local Kamba language. The translated question, administered to the heads of the households read "*Meendeo ni kyan?*". The translation of the word "*Development*" into the Kamba equivalent "*Meendeo*" is derived from the Kiswahili translation "*Maendeleo*" which indicates progress, translated as "*Endelea*"

⁵ Following the adoption of a new constitution in 2010, the Kenyan government implemented a devolved system of governance which came into effect in March 2013. Makueni which was a district at the time of study is now a County. The study sites therefore now fall in Kathonzweni district which is within Makueni County. There are instances in this paper where this area is referred to as a district especially in regards to statistical presentations.

in Kiswahili. Both Kamba and Kiswahili belong to the Bantu group of languages hence the construction of the Kamba language is similar to that of Kiswahili, for example in regards to the grammatical inflexion taking place at the beginning of the words and in the words (Gleason, 1961; Nurse, 2006). The two languages have an intimate relationship in the conjugation of their nouns and verbs (Hinde, 1904). The understanding and comprehension of the word 'development' by the respondents in this study would therefore be influenced by the community's experience and familiarity of the use of the word, given that language is dynamics and meanings attached to words and phrases may vary depending on context, historical experiences and previous uses attached to the words (Catford, 1967). The word '*Maendeleo*' in the Kenyan context, with its variants depending on the location and community/language has been widely applied in the country to refer to development of local communities (MYO, 2014). Maendeleo Ya Wanawake, an organization, which also derives its name from the word for instance, has its main agenda relating to development, that is, to improve the quality of life of rural communities in Kenya (MYO, 2014). Some of its activities of the organization which was registered in Kenya in 1952 include gender equality in development, civic education, governance and peace building and conflict management.

At the analysis stage, frequencies of the issues mentioned as referring to development, was done in order to detect those frequently mentioned by a majority of the respondents, thereby denoting priority issues of development from their perspective due to their frequency of mention by the respondents. Frequencies of these responses are presented in Figure 4.1.

The FGDs were conducted with community members aged between 18 and 60 years who were sampled by age and gender from the 11 and 16 villages comprising Kitonyoni and Mwanja sub-locations respectively. Respondents in the age categories and gender shown in Table 4.1 were selected from each village using the stratified sampling technique. The respondents were categorised by age and gender in order to limit inhibitions during the discussions and to understand these perceptions based on these categorizations, as gender has been found to be important in perceptions (Maccoby, 2002). Each group comprised between 6 and 12 participants to make it easy for the discussant to manage the group. Before the interviews were held, those sampled were approached, a consent form administered then an appointment for the discussion made. Replacements were done in instances where those selected were either unavailable or unwilling to participate. In total, 36 FGDs were held. Four field workers (2 male and 2 female) were trained on the research tools and conducted the

household interviews and group discussions in Kamba⁶. The KIIs were conducted in English since the community leaders could freely express themselves in English. Key informant interviews were administered to the two community leaders in charge of Kitonyoni and Mwanja sub-locations. The areas of investigation in these discussions included the respondents understanding of development at personal, community and national levels, their perceptions of persons/groups/institutions responsible for development and indicators of poverty in the community. The decision to use the local language was made in order to allow respondents to freely express themselves. The qualitative data were audio recorded and later transcribed and translated into English where necessary. A second examination of the translations after transcriptions was done in order to check for any inconsistencies and ensure reliability of the data.

Table 4.1: Characteristics of respondents

Method & respondent	Age-category	No. of groups/individuals
Individual household interviews (Kitonyoni only)	-	294
FGD Women*	18-24 years	6
FGD Women	25-40 years	6
FGD Women	41+ years	6
FGD Men	18-24 years	6
FGD Men	25-40 years	6
FGD Men	41+ years	6
KII community leader (Both Kitonyoni and Mwanja)	Adult	2
Makueni County government Officials (Both Kitonyoni and Mwanja)	Adult	3

*All FGDs were conducted in both
Kitonyoni and Mwanja sub-locations

4.8.2 Data Processing and Analysis

The qualitative data was coded in NVivo 9 software and analysed using the thematic approach, while the household's quantitative data was summarised and analysed using IBM SPSS statistics version 20. Emerging themes from the qualitative data were summarised and in some cases verbatim quotes used to illustrate responses on the relevant issues/themes. Selection of these quotes is done ensuring there is a balance along gender, age and sub-location.

⁶ Kamba is the local language spoken in the study area

4.9 Results

4.9.1 Meaning of development

The overarching definition of development in this study emerged to be its characteristic of upward mobility in almost all spheres of life. Improvements/progress in personal/household sphere leading to improvement in community affairs and then to national improvement was reported to be the pathway to development.

This study sought to investigate the community's perceptions of important needs. This investigation was done at various levels, including individual and household levels using interviews and at community levels through community group discussions and key informant interviews with community leaders and government officials involved in development in Makueni County (See respondents in Table 4.1). The first question seeking to understand how the community understands development was asked in interviews with heads of households. The question asked was "*What is development?*" (See Appendix 9 for the questionnaire) upon which respondents were encouraged to mention scenarios that depicted development to them. This information was then summarised in order to understand the ranking of these issues. These responses are summarised in Figure 4.1. The most important depiction of development to the respondents was access to water, followed by availability of electricity, improvement of transport and health care facilities. Makueni County is a semi-arid area hence the most important development priority is adequate water, followed by electricity supply while access to credit, absence of disease and improved security were ranked as least important in development priority needs. The 'other' category comprised access to money transfer services, access to churches, access to adult education, advanced farming methods, good neighbourly relations and access to higher institutions of learning. Responses from the government development officials concurred with the community members' views, where development was summarised as entailing the measure of a society's wellbeing including social, political and economic aspects as articulated by one of the government officials in this quote:

"This is a measure of the well-being of a society in three pillars; social, political and economic. Economic development means that people are able to afford the basics, social is where they are able to communicate

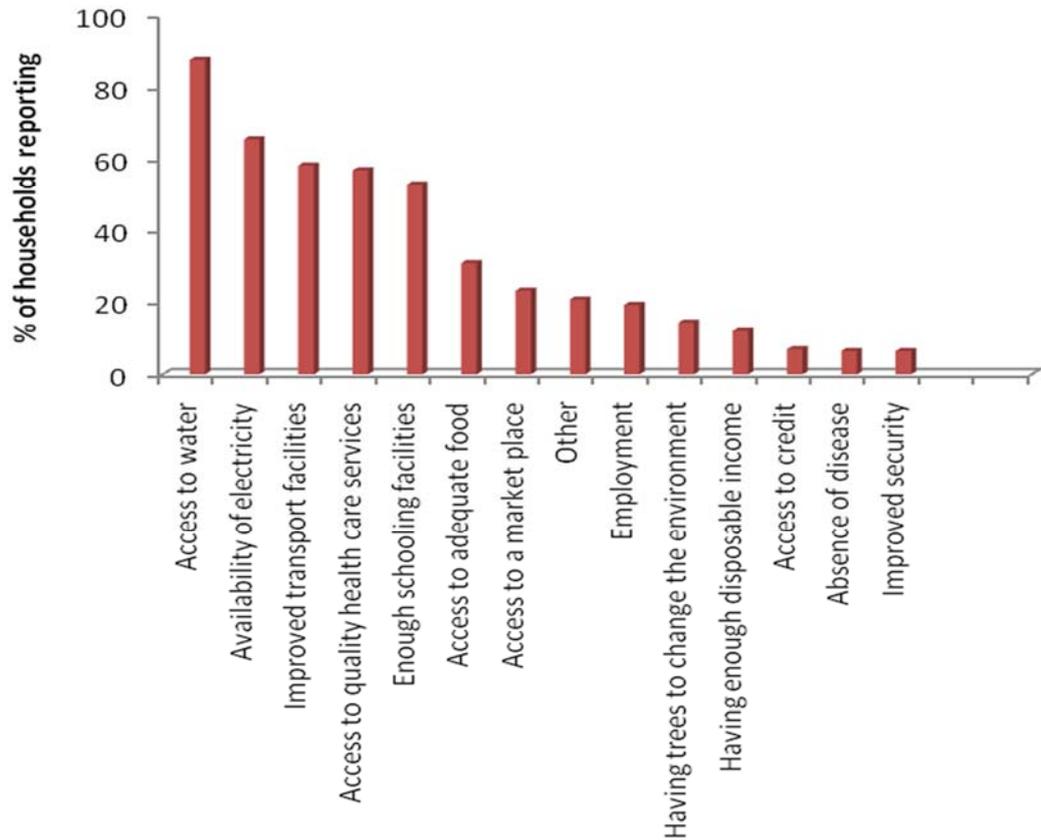
political development is when politics is based on issues, not patronage etc. The politics in a developed society are based on issues...” KII District Development Official

4.9.2 Ranking of community needs

4.9.2.1 Overall perceptions of development and ranking

Access to adequate and clean water was a priority development need where the leaders mentioned that there exist efforts to ensure that the community’s access to water is improved. At the time of study there were various on-going efforts to improve access to water in the study communities, including building community dams, boreholes and shallow wells. The importance of water in fostering the community’s development was outlined and includes benefits in such areas as ensuring that households and the community in general has adequate water for use. It was also indicated that with adequate supply of water, the community is able to engage in agricultural activities, thereby ensuring households and the community has access to adequate food supply.

Figure 4.1: Reported important aspects of development and their ranking (Source: Household survey in Kitonyoni, 2012)



Since gender is considered to be important in perceptions of development, this chapter also presents results of analysis focusing on the reporting of the factors considered to be important in development by gender. Cross tabulation of the factors mentioned in Figure 4.1 was done and chi-square tests used to assess whether the differences between male and female responses was statistically significant (Table 4.2). This analysis indicates that regarding the overall factors mentioned in Figure 4.1, there was no significant difference between how male and female respondents prioritise these development areas. Significant differences could only be observed on factors such as improved transport facilities, having adequate employment opportunities and having enough disposable income, where more males, than

female heads of households mentioned the presence of these three factors as indicating development.

Table 4.2: Reported important aspects of development by gender
(Source: Household survey in Kitonyoni, 2012)

	Male		Female		TOTAL		p-value significance
	%	N	%	N	%	N	
Access to water	51.8	145	48.2	135	95.2	280	NS
Availability of electricity	53.5	108	46.5	94	68.7	202	NS
Improved transport facilities	57.0	90	43.0	68	53.7	158	*
Access to quality health care services	54.0	81	46.0	69	51.0	150	NS
Enough schooling facilities	54.3	76	45.7	64	47.6	140	NS
Access to adequate food	52.0	51	48.0	17	33.3	98	NS
Access to market place	61.7	29	38.3	18	16.0	47	NS
Other factors	51.5	17	48.5	16	11.2	33	NS
Employment	67.6	25	32.4	12	12.6	37	*
Having trees to change the environment	41.3	19	58.7	27	15.6	46	NS
Having enough disposable income	69.7	23	30.0	10	11.2	33	*
Access to credit	66.7	10	33.3	5	5.1	15	NS
Absence of disease	42.9	6	57	8	4.8	14	NS
Improved security	60.0	3	40.0	2	1.7	5	NS

χ^2 test of independence between gender and perceptions of development: Significance levels *** <0.001; ** <0.01; * <0.05;

NS-Not significant

4.9.1.2 Perceptions of development at personal, community and national levels

Having understood the household's understanding/definition of development, a further attempt was made to understand these perceptions at various levels including at personal/household, community and national levels. Three questions were administered to the responding men and women:

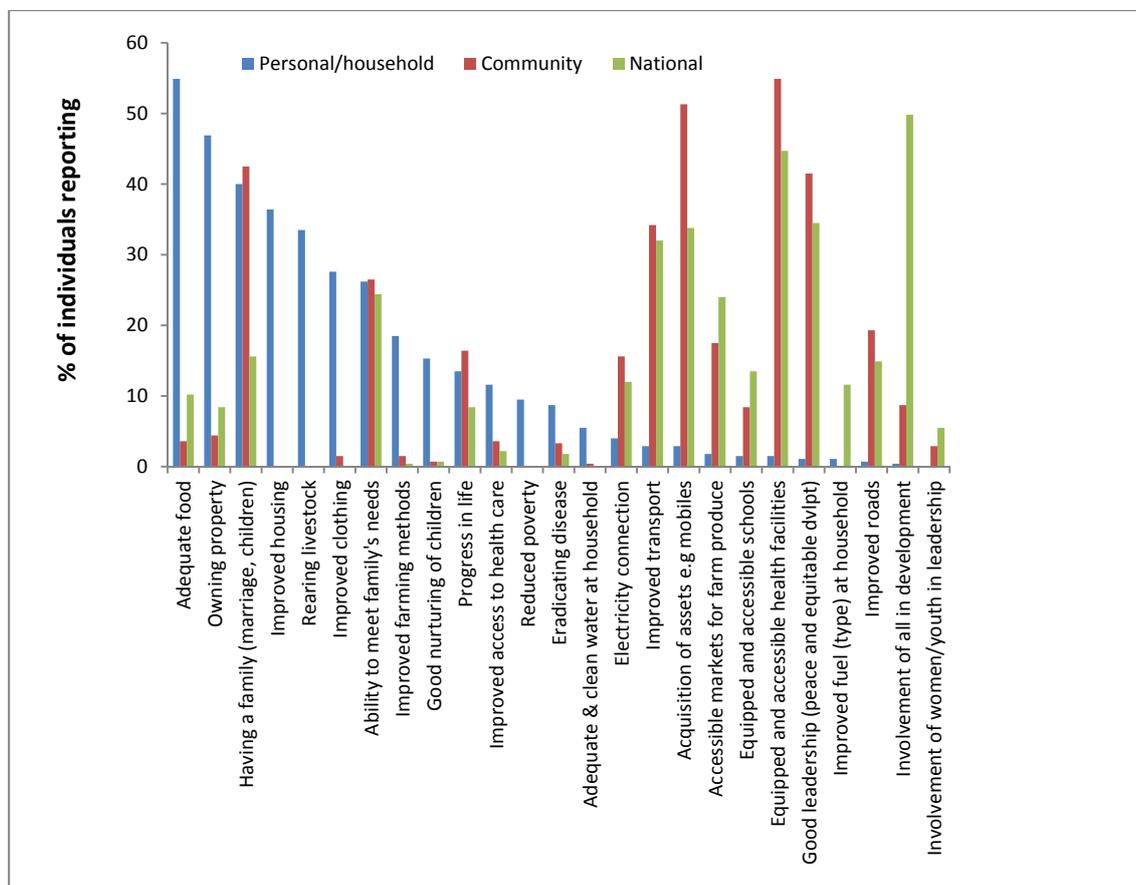
1. "What does personal/household development mean to you or what factors are important for your personal/household development?"
2. "And now, what does community development mean to you or what factors are important for your community's development?"
3. "And now, what does national development mean to you or what factors are important for your country's development" (See questions in Appendix 8).

Respondents were asked each of the above questions one at a time and prompted to give all the indicators of development as they perceived them. The responses were not pre-determined. The field assistants used ‘any other?’ probe to exhaust all the possible responses before proceeding to the next question. The responses to these questions are summarised in Figure 4.2 which shows how these responses vary at the personal/household, community and national levels. Improving one’s status through nurture and education, having a family and meeting basic needs were considered to be the most important indicators of personal development. At the community level, improvement in infrastructure while addressing obstacles to development and involving community members in development projects were cited as the important pathways to community development. National development, on the other hand was reportedly achievable through good leadership and judicial systems. Availability of electricity which was reported to have potential to facilitate entertainment and internet connectivity, thereby improving one’s connection with the world were especially cited by the youth as an indicator of national development. Development was also viewed as a hierarchical process where personal/household development contributed to community development and both eventually would help develop the nation.

Some of these factors overlapped at the three levels. Only two of the factors considered important at the personal/household level overlapped with those considered important at the community level, which include, having a family and the ability to care for one’s family. The others perceived to be crucial for the community’s development and which overlapped with the prerequisites of national development include having electricity, improved transport, acquisition of assets, accessible markets and health facilities, improved roads and good leadership with potential to ensure there is peace and equitable development. Well-equipped and accessible schools and the involvement of everyone in development were reported to be important for national development. In summary, factors considered to be important for personal/household development are those geared towards meeting of basic needs and the building of the family unit. At the community level, respondents valued factors focusing on infrastructural development while at the national level, improvement in infrastructure and leadership were considered to be the most important factors. Whereas access to adequate and clean water was reported in the initial investigation and in the qualitative investigation as being the most important need, it did not emerge as the first need in the follow-up investigation. This could be because the investigations were conducted at different time-

points where the community was experiencing varying weather conditions. The initial investigation was conducted during a period of scarce rain (March-May and September) whilst the later investigation was conducted during the rainy season (October-December). This may mean that the response to some of the questions could be influenced by the community's immediate felt needs, and that the prioritization of needs may also vary with personal conditions.

Figure 4.2: Perceived important aspects/factors of development at personal, community and national levels (Source: Household survey in Kitonyoni, 2012)



4.9.1.3 Gender differences in perceptions of development at personal/household, community and national levels

Guided by the gender and development theories applied in this study and other studies where emphasis is placed on the planning and implementation of development from a gender perspective, this study investigated the gender differentials in the perception of development.

Gender theories of development emphasize the importance of involving both men and women in development plans and initiatives at personal/household, community and national levels. To adequately involve both men and women in development however, understanding their views or factors they consider to be important in development is paramount. Seeking to understand the gender perceptions of development in this study was therefore informed by gender theories and by other research showing the importance of gender in perceiving factors important for development. Some of these studies, although not directly investigating gender perceptions in development, have found this variable to be strongly significant in perception of economic wellbeing (Bristor & Fischer, 1993; Hayhoe & Wilhelm, 1998). Gender theorists argues that these perceptions are informed by the socially-constructed roles of males and females and/or the socialization of men and women.

The gender analysis not only presents the ranking of development needs overall, at personal/household, community and national levels, but also investigates how these factors were perceived by the male and female respondents in this study. The analysis further shows whether these perceptions statistically vary between the male and female respondents. Table 4.3 shows the frequency with which factors considered important in development are mentioned by the male and female respondents. Chi-square tests of significance were used to check the statistical differences, that is, whether men and women perceive the issues important for development at the three levels differently. Those responding to this question were men and women aged 18-54 years and 18-49 years respectively.

Most of the factors considered important in development at the personal, community and national levels by those responding in this study did not significantly vary by gender, there were some factors where statistical differences were observed. At the personal level, eradicating diseases (91.7% for males vs. 8.3% for females), improved access to health care (90.6% for males vs. 9.4% for females), improved transport (87.7% for males vs. 12.5 for females), reduced poverty (88.5% for males vs. 11.5% for females), were considered most important by men than women, while rearing livestock (32.6% for males vs. 67.4% for females), improved housing (32% for males vs. 68% for females), nurture of children (26.2% for males vs. 73.8% for females) and ownership of property (28.7% for males vs. 71.3% for females) were considered most important by the women respondents. More men than women significantly reported that adequate food supply (80% for male vs. 20% for females), improved transport (58.9% for males vs. 41.1% for females), improved farming methods

(75.6% for males vs. 24.4% for females), proper nurture of children (90% for males vs. 10% for females) and general progress in life (87.5% for males vs. 12.5% for females) were important indicators of community development. More women than men however considered having well-equipped and accessible schools (39% for males vs. 61% for females), adequate and clean water in the households (35.8% for males vs. 64.2% for females), electricity connection (15.8% for males vs. 84.2% for females) and involvement of all members of the community in development matters (32.1% vs. 67.9% for females) to be important in community development. Factors found to be statistically different in national development include adequacy of food (96.4% for males vs. 3.6% for females), eradication of disease (17.4% for males vs. 82.6% for females), equipping and making schools and health facilities easily accessible (34.4% for males vs. 65.6% for females regarding schools and 21.6% for males vs. 78.4% for females regarding health facilities), accessible markets for farm produce (16.2% for males vs. 83.8% for females), having enough and clean water at the household (60.2% for males vs. 39.8% for females), involvement of women in development (21.9% for males vs. 78.1% for females) as well as good leadership with potential to ensure equitable and sustainable development (32.8% male vs. 67.2% for females).

Table 4.3: Gender differentials in perceptions of development at personal, community and national levels (Source: Household survey in Kitonyoni, 2012)

	Personal			Community			National		
	Male	Female	<i>P</i> ⁷	Male	Female	<i>P</i>	Male	Female	<i>P</i>
Adequate food	53.6	46.4	NS	80.0	20.0	*	96.4	3.6	***
Eradicating disease	91.7	8.3	***	66.7	33.3	NS	17.4	82.6	**
Improved access to health care	90.6	9.4	***	48.7	51.3	NS	51.2	48.8	NS
Acquiring assets e.g. mobile phones	62.5	37.5	NS	0	0		0.0	0.0	
Improved clothing	46.1	53.9	NS	0	0		0.0	0.0	
Rearing livestock	32.6	67.4	***	0	0		0.0	0.0	
Improved transport	87.5	12.5	*	58.9	41.1	*	44.8	55.2	NS
Improved housing	32.0	68.0	***	0.0	0		0.0	0.0	
Improved fuel (type) at household	66.7	33.3	NS	0.0	100.0		50.0	50.0	NS
Improved farming methods	54.9	45.1	NS	75.6	24.4	***	60.9	39.1	NS
Nurture of children (education etc.)	26.2	73.8	**	90.0	10.0	*	83.3	16.7	NS
Having a family (marriage, children)	43.6	56.4	NS	0.0	0.0		0.0	0.0	
Owning property	28.7	71.3	***	22.2	77.7	NS	60.0	40.0	NS
Ability to meet family's needs	51.4	48.6	NS	0.0	0.0		0.0	0.0	
Reduced poverty	88.5	11.5	***	0.0	0.0		57.6	42.4	NS
Equipped & accessible health facilities	75.0	25.0	NS	47.9	52.1	NS	21.6	78.4	***
Equipped and accessible schools	25.0	75.0	NS	39.0	61.0	**	34.4	65.6	***
Improved roads	100.0	0.0		54.2	45.8	NS	43.9	56.1	NS
Accessible markets for farm produce	40.0	60.0	NS	43.5	56.5	NS	16.2	83.8	***
Enough & clean water at household	66.7	33.3	NS	35.8	64.2	***	60.2	39.8	**
Electricity connection	27.3	72.7	NS	15.8	84.2	***	46.3	53.7	NS
Involving women in leadership	0.0	0.0		50.0	50.0	NS	21.9	78.1	**
Involvement of all in development	100.0	0.0		32.1	67.9	**	56.1	43.9	NS
Good leadership for peace and dvlpt	100.0	0.0		29.2	70.8	*	32.8	67.2	***
Progress in life	45.9	54.1	NS	87.5	12.5	*	86.7	13.3	**

χ^2 test of independence between gender and perceptions of development: Significance levels *** <0.001; ** <0.01; * <0.05; NS-Not significant

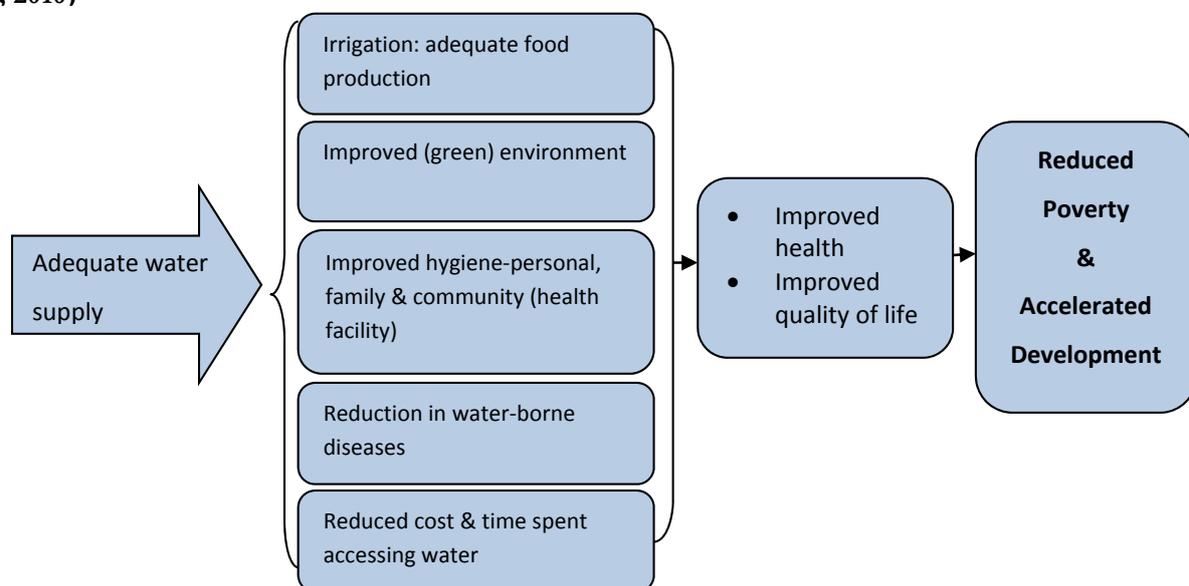
Chi-square tests for some variables with low samples sizes was not done. These variables do not have p-value results.

⁷ Chi-square p-value significance for test of independence between gender and perceptions of development, at personal, household and community

4.9.1.4 Water as the most important factor in development

As highlighted in Figure 4.1, an adequate and clean water supply emerged at the most important indicator of development in the study community. This point was overwhelmingly made across age and gender. The main argument for this point was in regards to the importance of water at the person's household, community and national levels. It was reported that availability of adequate and clean water would benefit the community greatly, as this would help meet other development priorities (Figure 4.3). Access to adequate water has potential to enable irrigation for adequate food production at the three levels as well as contribution to better health and an improved environment. Enhancement of both personal/household and community hygiene, specifically at the health facilities which are currently underserved with water, as well as in reducing water-borne diseases and reducing the time and cost spent on accessing the commodity, instead ploughing these into development efforts, were also reported to potentially enhance development. Further, being a semi-arid area, emphasis was laid on the potential to enable the community construct bigger structures, since a majority resided in small structures, thereby considering themselves poor.

Figure 4.3: Author's summary of respondents' perceived importance of adequate water supply and its link with development and poverty reduction (Source: Qualitative data in Kitonyoni and Mwanja, 2010)



Water as a priority development need in the study community was not only mentioned by responding community members, rather also by the community leaders and other leaders at the district level responding in this study. The importance of water in development as

perceived by the government leaders was highlighted by their focus on ensuring that the community makes an improvement in water access, for instance, through the development and improvement of the various sources of water such as the shallow wells and boreholes.

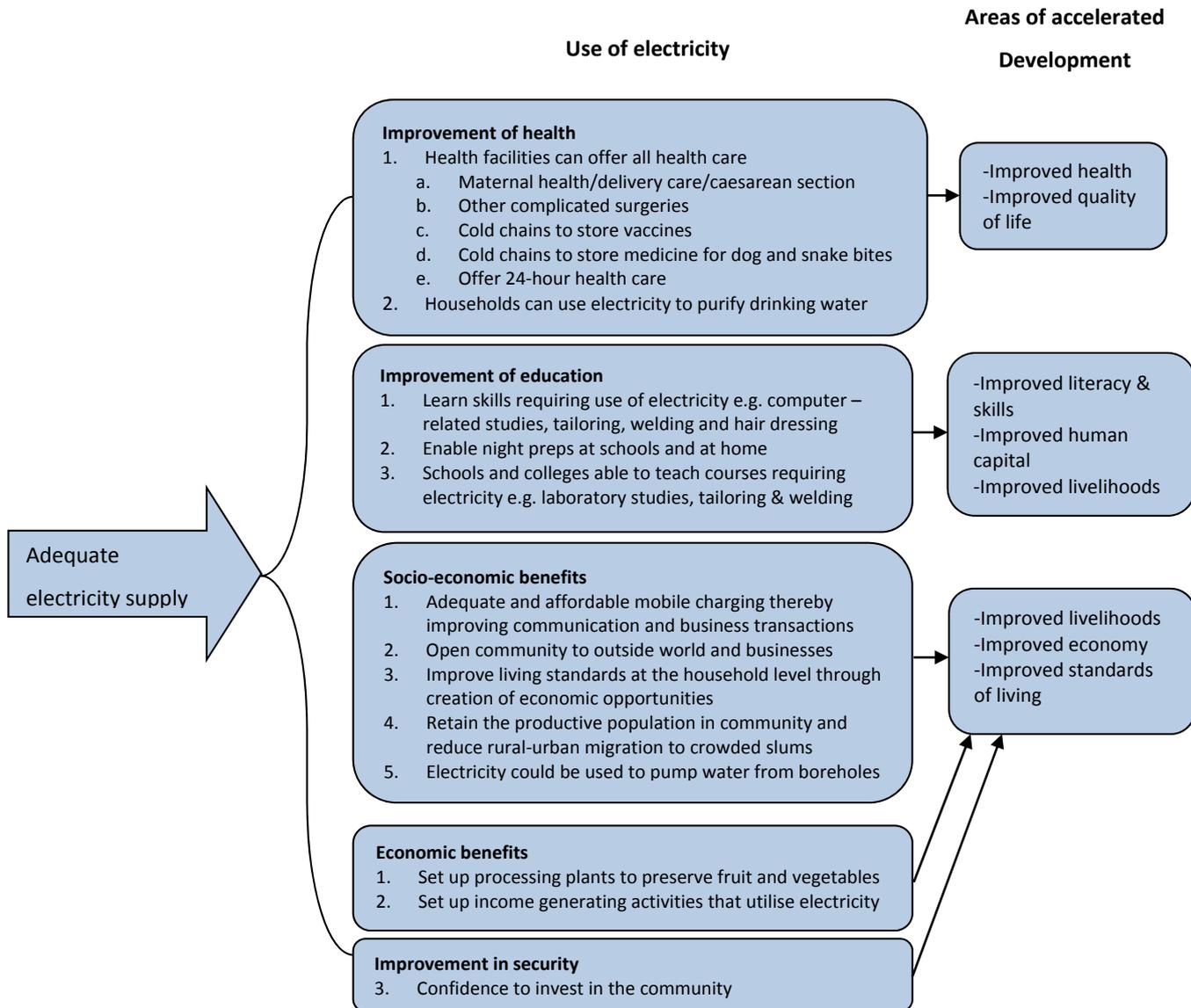
4.9.1.5 Availability of adequate electricity supplies

Adequate energy sources, including reliable and affordable electricity were reported in equal measure by men, women and youth as having the ability to unlock the community's development potential. One of the areas likely to benefit would be access of health care, specifically immunization for children aged below five years, maternal health services, complicated surgeries, antidotes for snake and dog bites and night services through the available health facilities which lacked electricity at the time of study. Availability of electricity was deemed important as it was likely to help reduce some of the health-related challenges which impact development by exacerbating health conditions, increasing health spend through transport and cost to other facilities located further. The pathways to development through better education opportunities in the presence of adequate, affordable and reliable electricity were also highlighted. It was reported that availability of electricity in the community would enable young people to take computer lessons, have night prep at school as well as study in the evenings at home. Electricity would also enable schools and colleges to teach courses that require the use of electricity such as laboratory techniques, welding, hair-dressing and tailoring. These trainings were considered important in creating employment opportunities for the youth, while also availing their expertise in the community.

Benefits of electricity supply to the general community's socio-economic status were also highlighted as including availability of affordable and reliable charging services for mobile phones, thereby improving business transactions and communication and living standards at households and in the community through the opening up of the community to business activities. In addition, it was reported that young people would stay in the community and start business activities such as welding, tailoring, hair-dressing and computer-related ones that would use the electricity availed thereby creating employment opportunities in the community. The community, it was also reported, would have an opportunity to open factories that could process and preserve some of the community's produce such as mangoes and tomatoes that currently gets wasted due to limitations in preservation means. Being a semi-arid area, the benefit of electricity on access of clean water for the community was also

highlighted by all the three groups responding in the group discussions. Figure 4.4 summaries the potential developmental-benefits of electricity if available in the study community.

Figure 4.4: Author’s summary of respondents’ perceived importance of adequate electricity supply and its link with development (Source: Qualitative data in Kitonyoni and Mwanja, 2010)

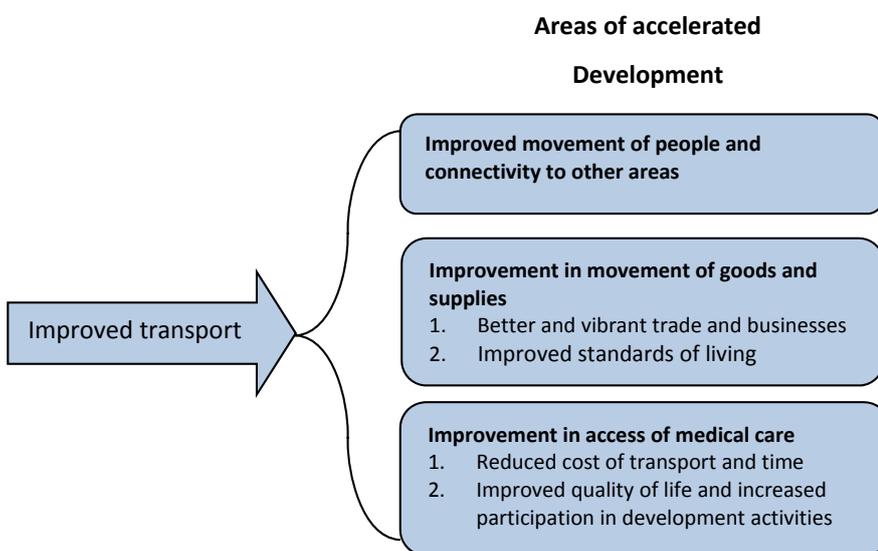


4.9.1.6 Improvement in transport

It was further found from the study’s qualitative data that the communities of study were underserved with adequate and reliable means of transport making access to the community

difficult. There were also challenges accessing the neighbouring towns, especially Makueni County capital, Wote town (see Figure 3.2 for the distance between the villages and Wote town). Improvement of roads was therefore reported to have potential in advancing the development of the study communities as this was reported to potentially improve movement of people and goods to the markets in all seasons (Figure 4.5). It was reported that this would in turn shorten travel distance thereby enabling people to engage in other productive activities. Transportation of patients to access health care in a timely manner would also be quickened, cheaper and more comfortable. This would in turn enable households to save money that would have been spent on cost of transport, redirecting this to other development needs. Transportation of perishable goods to the markets would also be improved thereby minimizing wastage and increasing earning from the farm produce. Improved transport was cited as having potential to improve the connectivity of the community to other communities and towns

Figure 4.5: Author’s summary of respondents’ perceived importance of improved transport and its link to development (Source: Qualitative data in Kitonyoni and Mwanja, 2010)



4.9.1.7 Personal/household development

Improving one’s status: The aspect of progress was overriding in the indicators of personal/household development. Those responding in the group discussions cited acquisition of an education, marriage, children and meeting one’s basic needs, acquisition of

property and improvement in one's personal space as the indicators of personal development.

In addition, continued improvement on food consumption and clothing, property-ownership, and improvement in one's housing as well as the improvement in the source of fuel and means of livelihood were reported to be important indicators of personal/household development. The importance assigned to progress in the various spheres of one's life can be highlighted in this quote:

"...if I used to borrow a donkey from my neighbour, I stop and buy mine ... If I was using kerosene for lighting then I buy solar" Female 25-40 FGD, Mwanika.

Empowerment: It further emerged that personal economic development could only be achieved if one is empowered through the acquisition of quality and higher education as well as through acquisition of life-skills. Defined as the process of improving one's autonomy in decision-making, self-reliance, direct democracy and social learning, most of the discussants in this study (regardless of age and gender) viewed education as an avenue to improve one's communication and avail more economic opportunities (Friedmann, 1992). Given this definition, some discussants in this study considered themselves least-developed because they did not have adequate education to enable them to compete in the job market and often got oppressed by those with higher education. This is aptly captured in the following quotes:

"Like getting enough education because the education that we have is not enough that can give us development that can match the times we are living in" Female 41+ FGD, Mwanika.

"Enough education is like going up to the university level and having the ability to communicate in any way because like now we have internet, the face book and you know, you can't do such without having enough education" Male 25-40 FGD, Mwanika.

The other form of empowerment that emerged as important in fostering personal development relates to parental nurturing (physically, morally, religiously and culturally) enabling one to become self-reliant. As emphasized in this quote, this is considered important due to its potential to empower young people to become independent and to care for themselves and their future families:

“In my opinion, development is from the time I was born by my parents [sic], bringing me up and showing me what is right and what is wrong ...what can harm me and what cannot, and they brought me up by teaching me how I can live in this Gods’ word...took me to school...” Female 18-24 FGD, Kitonyoni

Asset-acquisition at the household level, including having electricity, own water source, radio, mobile phone, a car and businesses were considered as indicators of progress. In some instances, the acquired assets were further used to meet other needs at the household-level. The importance of asset-acquisition cut across gender and across the various age-groups participating in the discussions, thus:

“I feel like I have some ‘development’ in my home because I have a small borehole that I have dug, and I use the water for my goats and irrigate a tree, so I feel I am doing well” Female 25-40 FGD, Mwanja.

“...even moving from a grass thatched house to one that has corrugated iron sheets” Male 18-24 FGD, Kitonyoni.

Family: The most common measures of personal development highlighted, especially by the older male respondents included getting married, having children and having the ability to comfortably care for one’s family through education and provision of basic needs. Having a family was given high importance as it also accorded someone respect and a higher status among peers and in the community. Older male respondents emphasized this aspect of development, thus:

“As you have heard, all of us have wives so a man who doesn’t have a wife basically has nothing, what can he possibly discuss among men? He doesn’t have a child, no goat, no dog. So that man who does not have a wife has basically nothing because she [wife] is the pillar to that man, anything even if it is a child is always under the care of the woman because even in my home I don’t know the things that we have, but my wife does. So women are the foundation and pillars of us men in this area” Male 41+ FGD, Kitonyoni.

Having a wife was considered by most male respondents as an important asset at the household as women are initiators of development at the house/home. Interaction with other women and participation in small-scale development strategies, including membership in and saving through the rotating credit associations (ROSCAs) empowers women to

adequately perform this developmental role. By associating with other women and visiting them, women were reported to be able to identify the areas of their homes needing improvement. Consequently, many aspects of home improvement are handled by women because these areas are considered to be ‘small-scale’ while the ‘bigger’ development efforts like schooling and investment are usually handled by men. To younger respondents, marriage and family were not frequently mentioned as important aspects of one’s personal progress.

4.9.1.8 Community development

The main aspects of community development were reported to result from a collective effort by all members of the community. As highlighted by this male respondent, it also emerged that community development emerges from the trickle-up effects of personal development:

“Development for me as a man from this community... I should be in a position to work and contribute something to this sub location for example, I am a businessman and I spend my profit just within the community...I also educate children and if they would perform well, they would come back and help the people of this community as a whole” Male 41+ FGD, Kitonyoni.

The prerequisites for community development that have potential to enable community members and households to achieve better standards of living, thereby contributing to both their and community development include improvement in infrastructure, access to quality education and engagement in businesses, manufacturing, trade and export of manufactured goods.

Infrastructure: Improvement in infrastructure including easily accessible and adequately equipped health facilities, good quality schools, accessible markets and good quality roads were consistently mentioned by all respondents as important indicators of community development. In addition to opening up the community to trade, accessible roads were reported to be important particularly being a farming community whereby farmers would easily get their agricultural produce to the markets on time. This sentiment was shared by both community respondents and government representatives responding in this study. A quote from one of these respondents sums up the importance of infrastructural development in community development in this quote:

“Development to me means having education, roads, electricity, water, more income, market for agricultural commodities-this depends on the region, but in Makueni, this is a very important factor. If the infrastructure is correct, everything else will fall in place, because infrastructure opens up even the most of the remote areas, health care, poverty alleviation” KII Makueni District Government Official.

Further, a poor road network is an impediment to both personal/household and community development. It emerged that fruits and vegetables often rot on the way to market due to poor roads resulting in losses for farmers and retarding their progress, thus:

“R5: Then, the mangoes just get lost [they go to waste], because where will the vehicles pass? ... that is a loss which would have brought profit to Kenya. They just end up rotting and yet they were to go to (be exported) to international countries” Female 25-40 FGD, Kitonyoni.

Yet, discussants were confident that better roads would provide easy access to health facilities:

“...and if it is someone who is unwell, they can be taken to the hospital through good roads so that they won't suffer a lot by taking them to the hospital through the bushes” Female 18-24 FGD, Mwanja.

The importance of having adequate and consistent supply of water as a route to development, as indicated in Figures i and ii was reported to achieve this if all households, health facilities and schools were connected to a water source. It was recounted that this would then enable households to irrigate their farms, thereby cultivating enough food and eliminating malnutrition and resultant illnesses. In addition, clean water in households would improve hygiene while at the same time ensuring a sanitary environment at health facilities. Further, households would be able to build bigger houses (which in itself was considered a form of development) and engage in businesses that require adequate water supply. Most importantly, it was reported that this could significantly reduce the cost of water, which was reported to be Ksh. 8-10 [Ksh. 80 is approximately equivalent to USD 1] at the time of study.

Absence of electricity in the community was highlighted as an impediment to the development of the community, as it is an obstacle to the acquisition and use of life-skills for the youth who miss formal higher education, forcing them to migrate to cities in search of opportunities. The situation also deters entrepreneurship and denies the community some

important services such as photocopying and health services (maternal health, cold chains for vaccines and antidotes for snake and dog bites). The importance of electricity was articulated in these quotes:

“Yes! If electricity comes within our area, the women will not have to go and be cut [undergo caesarean section] at Wote [the nearest town, which is approximately 50km away] since our dispensary here will have the theatre section” Female, 25-40 FGD, Mwanja.

“But if we had electricity just here around, such a person can work from within. They can weld doors and windows for people to buy and at the end of the day, that person will just go and sleep at his home [own his own home], no one will ask him for rent” Female, 25-40 FGD, Kitonyoni.

4.9.1.9 National development

Good leadership that can ensure sustained peace and progress for all Kenyans and credible facilities and institutions alongside poverty eradication efforts were mentioned as key factors that can drive national development. The characteristics of national development on the other hand included gender, age and regional balance in leadership and equitable development, particularly since Makueni was classed among the least-developed on infrastructure. Like community development, national development was mentioned as only possible once personal/household and community development was met.

4.9.1.10 Poverty as an indicator of lack of development

This section presents results of the perceptions of poverty as an aspect of development that acts as a barrier of development progress. The perceptions of poverty in this section are grouped into social, economic, health and socio-economic indicators are summarised in Figure 4.6.

Social indicators of poverty

Family: Just like in perceptions of personal development, lacking a family was overwhelmingly considered to be one of the most important social indicators of poverty, as the never married and/or childless were considered to be poor. However, the inability to comfortably take care of one's family was also a sign of poverty. The other common social indicator of poverty in Makueni was reported to be widowhood and orphan hood, as those

experiencing these, in most cases lose economic and social support and therefore often struggle to meet their most important needs.

Respect: The poor, it was reported, were often less respected in society and rarely got the chance to socially engage with the rest of the community, particularly in public debates and any attempt to do this caused them to be ignored and belittled. The most affluent members of the community on the contrary, were considered opinion leaders in the community, even if they were uneducated. They were also reported to be arrogant especially when relating to those considered poor.

Psychological stress: The inability to take care of one's needs, coupled with other challenges, exposed the poor members of Makueni to psychological stress, which manifested in absent-mindedness and foul mood, making it difficult to interact with other members of the community. This point was candidly made by both male and female respondents and across the various age groups participating in the discussions:

“The poor person is always bitter, he is never happy because he is thinking about other things and you are seeing his problem. He thinks about what people will eat at my home before the sun set [sic]. You might think he is happy but he is very annoyed. You talk to him and he will not respond. He has not heard you because his mind is far” Male Youth FGD, Kitonyoni.

“His mind is very far because he is thinking about food and his children. What he will do and it is not his wish, is only that he is suffering [sic].” Female 25-34 years FGD, Mwanja.

Economic indicators of poverty

Housing: the most glaring economic indicator of poverty regarding housing relates to the construction material used, for instance, those with grass-thatched and mud-walled houses were considered to be poor. In addition, the size of the house distinguished the very poor from the non-poor as the poor lived in very small and often crowded houses, indicating the inability to afford more adequate material. In addition, the very poor homesteads and houses are often dilapidated whereby walls may have gaping holes and may lack protective fences. Regarding household items, the poor lack basic household assets such as utensils and water jerry cans and often use calabashes for serving food, or borrow utensils from neighbours.

Livelihood: Compared to the more affluent in the community, most of who were reported to have formal jobs and therefore able to afford to purchase household items in bulk, the

poor were reported to often have limited choices in terms of livelihood hence rely on casual jobs in the farms and houses of the more affluent members of the community. Manual labour was however not limited to adults as children from poorer households were also sometimes compelled to work as casual workers in order to help support their families, thereby missing school or dropping out altogether. Consequently, the poor often bought household items in small quantities. As captured in this quote, the poor also generally earned less in formal employ, barely enough to cater for their needs:

“...a poor person...poverty depends on how much you earn. If you look at most people here ,let us take for example myself, I work for 150 shillings a day [Ksh. 80=1USD] and...I have like two wives and four children, so you find that if I calculate that 150 with the children [sic] I have because each child has to get a share, so you find that every child eats [sic] about 8 shillings so it means they do not get enough food so if you were dividing this 150 shillings among six people you will never find a chicken there [meaning the family is unable to afford even the most basic property]... dressing is by luck...” FGD Male 25-34, Kitonyoni.

Discussants in this study reported that children from poorer households often have poor dressing, including tattered clothes and are often dirty due to the inability to afford/access soap and a change of clothes. In addition, they often use locally-made attire, including *Akala*⁸ shoes. A majority of children from poorer households were also reported to drop out of school for lack of tuition fees, uniform and other schooling necessities. Children from affluent families were reported to lead luxurious lives and had most things they need and want, including mobile phones. Regarding food consumption and diet, poor families were reported to face challenges in accessing three meals a day and often had inadequate food, wanting in nutrition and amount. They were reported to just eat basic food for survival with very little variation in diet while more affluent households were reported to comfortably have meals rich in all the essential nutrients as well as eat food considered to be luxurious, for instance chapatti, rice, beef, milk and bread.

It also emerged that accessing a comfortable livelihood is a big challenge to poorer households who in most cases lack adequate education and skills to compete in the job market. Such families therefore find it difficult to escape poverty because they are also unable

⁸These are sandals locally made from old car tyres

to invest adequately for posterity. They also in most cases have poor access to other means of livelihood, for instance many poor families were reported to own small pieces of land that can barely sustain large-scale farming. They therefore face challenges in accessing the farm input necessary to improve farm output. In addition, the rich own more property including cars, bicycles, motor cycles, mobile phones, own land, cows (both indigenous and exotic), have a shop/business that is doing well, live in iron-sheet roofed houses, have solar power in their houses and have their own boreholes and toilet facilities. A quote from one of the FGDs supports this:

“There are families that lack resources and you may find that there is no educated child that can support the family. The only children who are available are in school and require school fees but in such a family there may lack a member who is earning income and all the members are present but they lack a big piece of land, it happened that they only own a small piece of land and they cannot carry out serious farming in the small piece of land. They only depend on digging terraces [manual labour] or that the man and the woman collect firewood to sell at the market and the little income that they get daily they are not in position to save” FGD Male 25-35 Mwanja.

Affluent households were reported to own property that makes their lives easy or luxurious. Such facilities include water tanks, dairy cattle, electricity and refrigerators among other facilities.

This study further found that having some items like livestock and poultry is highly valued because this can be used as insurance during tough times. It was reported, especially by the women respondents that eggs, chicken or livestock could be sold and the money used to take care of emergency situations such as unexpected visitors, seeking health care or paying school fees or used as a meal. Seen as an investment, a normal household/homestead is expected to have them and those that lack them are considered poor.

These views on livelihood challenges as faced by the poor highlight the cyclic nature of poverty where the conditions are interrelated and therefore far-reaching to those caught in poverty.

Access and affordability: The state of despair of the poor in this community can further be captured in the ‘small economy’ that they engage in, by purchasing household items in smaller quantities, mostly from the small *kiosks* within the villages while the better-off families undertake huge purchases, mostly from larger outlet stores. In order to capture this group of

consumers, business people often have to repackage their products into smaller quantities in order to cater for poorer people in the community. Further, the poor, it was reported are often unable to afford adequate food and face cyclic episodes of starvation during the dry seasons. They face difficulties in accessing other essential services such as schooling and health care. Consequently, they depend on other people to meet their basic needs and on aid in times of drought and food scarcity. Regarding dressing, those from poorer households in the community of study did not seem to have many changes of clothes.

Health

Knowledge and access: The poor were reported to lack knowledge and access of essential health services and products including family planning methods and therefore always get more children than they can afford to care for. In addition, when sick, they are often unable to afford transport to hospital and the prescribed medicine because this is not given free at health facilities. Consequently, the poor often access health services and products made from unqualified sources.

Poor health outcomes: The inability to afford adequate food rich in all required nutrients often leads to poor health including under nutrition thereby exposing the community to other health issues. In addition, those with physical disabilities are considered poor because they are often unable to work in order to improve their situation or to access basic services including health and education. Those affected by HIV/AIDS are also considered poor, especially since they may lose the main income-earner, spend family savings on treating the illnesses arising from the condition or suffer psycho-social stress due to the illnesses or resultant loss of the family member or resources spent on their treatment. The poor's inability to access family planning products and services often leads to bigger and unplanned families than can be comfortably cared for:

“...the rich person is capable of handling emergencies like sickness, such a person is capable of taking himself and his family to the hospital and potential to take care of his family” FGD Male adults above 35, Kitonyoni.

Psychological worries: Due to the many challenges that they face, the poor often develop psychological worries, depression and resort to alcohol and substance abuse and therefore rarely engage in positive social interaction with other community members.

Socio-economic indicators of poverty

Schooling: It emerged that children from poor homes attend the local village schools, considered to be substandard while those from less poor backgrounds attend boarding schools which are better-equipped but expensive. In addition, children from poor families, although may be intellectually gifted, often drop out of school due to lack of fees or as a result of owing the schools money in form of unpaid fees and tuition. As a result, they may fail to get their school certificates that would aid advancement in life. New education policies, i.e. free-primary however requires all children to be in school, a task given to village administrators because children from poorer families often skip school to help meet family's need. Children from poor households could also skip school due to the unaffordability of the other associated costs of education such as lunch and school uniform, resulting in poor performance. Children from more affluent background, although facing less challenges, equally perform poorly because they are not empowered to work hard; with access to money, opportunities can often be secured for them.

Education was viewed as an important avenue to escape poverty. This is because it enabled even the poor's children to enable the families escape poverty by accessing opportunities arising from education. Those who educate their children, even if at the time considered as poor, were considered potentially rich.

Entertainment leisure time: The poor were reported to lack entertainment facilities including radio, television and electricity (to power the entertainment facilities). Their leisure time was therefore reported to be mainly during the early afternoon or evening, after work while the more affluent community members have more leisure time in the evenings. People from poorer households therefore often go to bed earlier than their more affluent counterparts:

“...when you pass by a homestead that is quiet and there is no lighting that is a poor family...They slept at seven o'clock because there was no money to buy paraffin...By eight o'clock you will find that most of the [poor] family's people have already slept but there are those who go to bed at eleven [the rich] because they are satisfied [had dinner] and are discussing about [planning] the following days activities. They [rich] also listen to the radio [recreation]” FGD Youth Mwanja.

4.9.2 Linking poverty and development

Definitions of poverty not only highlight areas where development efforts may be focused, the link between poverty and development concepts gives a better idea of how the two interlink and the approaches to undertake in order to improve the wellbeing of Makueni residents. As shown in Figure 4.7, it emerged that development and poverty alleviation is a hierarchical issue that builds on from meeting the needs of individuals and households, who then contribute to community development and their collective efforts contribute to national development. It was reported that unless individual/household development is achieved, it may be difficult to achieve community and national development. Further, discussants in this study articulating perceptions of poverty and development although indicated some economic-related indicators, various non-economic related indicators were also highlighted, such as psychosocial aspects.

Figure 4.6: Author's summary linking poverty and development indicators in Makueni

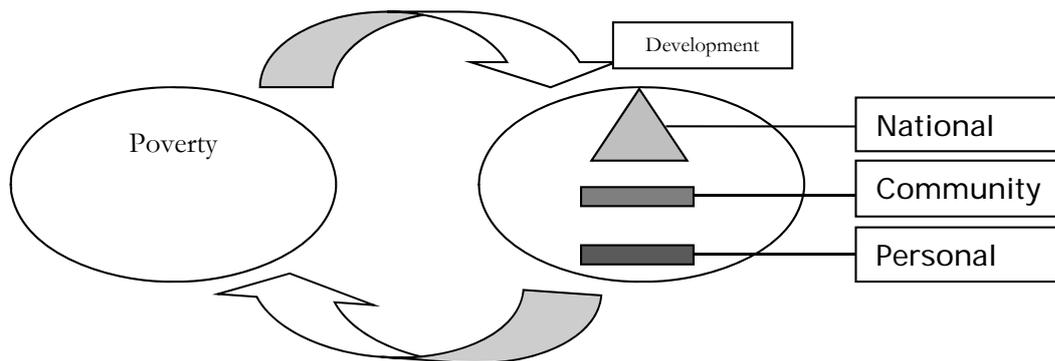
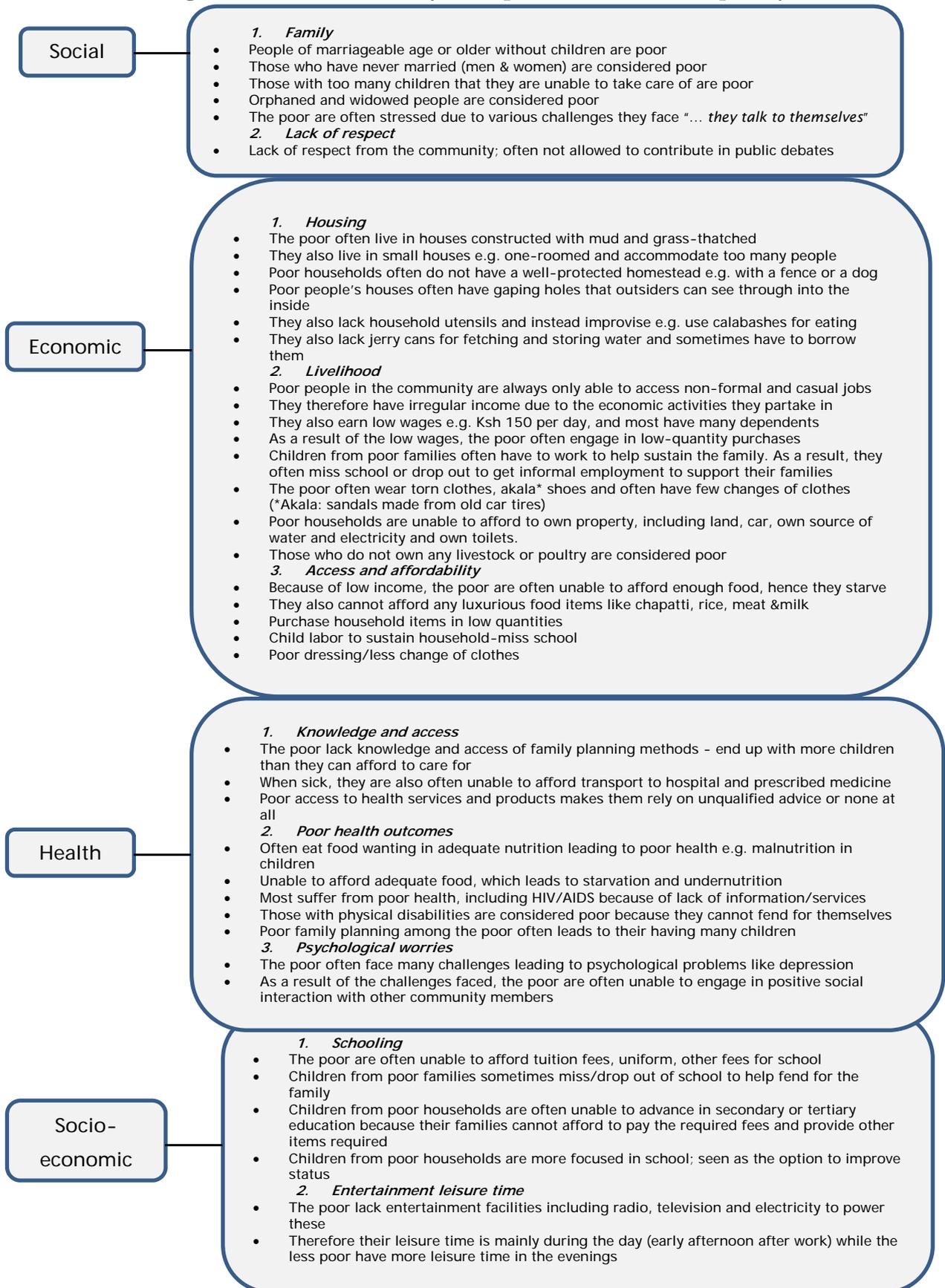


Figure 4.7: Author's summary of the perceived indicators of poverty in Makueni



4.9.3 Best approaches to development

In addition to discussing the indicators of development, the best approaches to development were also discussed. Both male and female discussants in this study mentioned involvement of community members in projects implemented in their area, including providing constant information on the efforts and progress and asking for their contribution in monetary and in kind. The importance attached to community participation in development is aptly highlighted by one of the female respondents, thus:

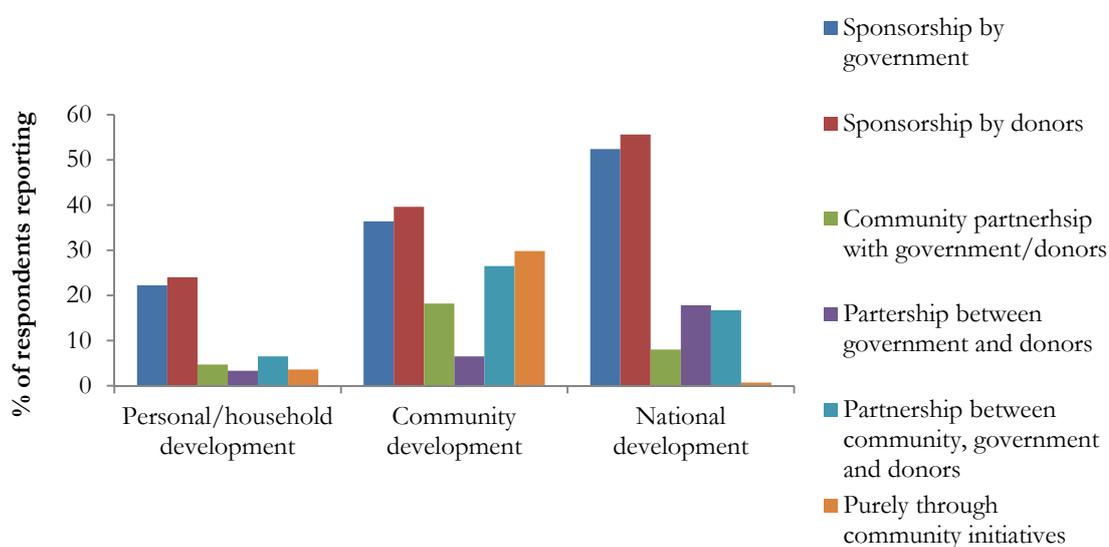
“And in case of any contributions, they [should] call upon everyone, they [should] say what they are building, the progress in terms of finances and the requirement for each of us” Female 25-40 FGD, Mwanua.

It also emerged that to ensure development progress is achieved in the study community, focus must also be paid on strategies that can help alleviate poverty. This study found that higher development status could only be achieved with reduction in levels of poverty, which were reported to be high at the time of study. A district development official remarked:

“Development is linked to the wellbeing of a society. If a society is poor, one cannot say that the society is developed” KII, District development official

Asked what strategies would be best applied in order to achieve development, most of the respondents indicated sponsorship by the government and donors as the best approaches in achieving personal, community and national development, with achieving national development through government and donor-sponsorship ranking higher (Figure 4.8). For community development however, initiatives purely implemented by communities, those implemented in partnership with government and donors or those implemented purely as a partnership between the government and donors were considered important avenues through which development could be achieved.

Figure 4.8: Perception of strategies through which development can best be achieved at household, community and national levels (source: author's household survey data)



Increased funding through loans and subsidies as well as through other benefits were reported as important strategies that can foster development. This was reported by both community members and government officials who viewed development as best-addressed through partnerships among community, government and the international community. In addition, implementation of projects/programs that can take advantage of the community's economic activities, including building a fruit processing factory to process and preserve farm produce were widely mentioned across age and gender as being important for the community's progress. The study community is mainly served with poor dirt roads, making it difficult to get farm produce to markets, especially during the rainy seasons. Further, approaching development both as a sponsorship and a partnership where sponsors can fund development projects while community members contribute labour and other materials would help foster development. Community members could also be empowered through waiving of tuition fees for higher education and linking farmers to markets that offer better prices for their farm produce. The various sponsors or partners may include the government, through development projects like the Constituency Development Fund (CDF), Agricultural research institutions (in order to improve yields) and through non-governmental

organisations which can help finance projects relating to food and water supply and also get support from individual philanthropists.

4.9.4 Development as a hierarchical affair

This study reveals development to be hierarchical where it trickles up from individual/household, to community and to national development. Figure 4.9 summaries this perception of development as a hierarchical affair. It emerged that unless individual/household development is achieved, it may be difficult to achieve community and national development. The trickle-up effect of development from the individual, to community and to the national level was highlighted by both community respondents and government leaders responding in the study. This quote from a community leader clearly outlines this importance:

“It should be a personal issue because the development of a nation depends on the development of an individual, therefore if an individual is developed, then the nation too becomes developed. Also a personal issues so that collective efforts of each individual can bring about greater change. It will be pointless if there is development at the national level when the individual person is not developed” KII Community leader.

The study also finds that emphasis is placed on meeting different needs at these three levels. Development at the personal/household level for instance mainly revolved around improvement in capabilities in order to improve livelihoods and wellbeing. Having a family is one of the measures of development at this level, articulated during this study. The importance of a family, specifically a spouse and children was considered important as it raises one’s social status. The other areas of personal/household development considered crucial in improving capabilities include having an adequate education, good nutrition and adequate shelter. Community development on the other hand, is mainly perceived as revolving around improvement in, and access of community resources and services. Emphasis was placed on improving infrastructure, and the associated services such as health facilities, schools, electricity, roads and markets, all of which would in turn contribute to an improvement in the community’s wellbeing. The needs perceived to be important at the national level were mainly political, for instance an improvement in leadership that has potential to enhance national peace and equitable development.

4.9.5 Gender involvement in development plans and initiatives

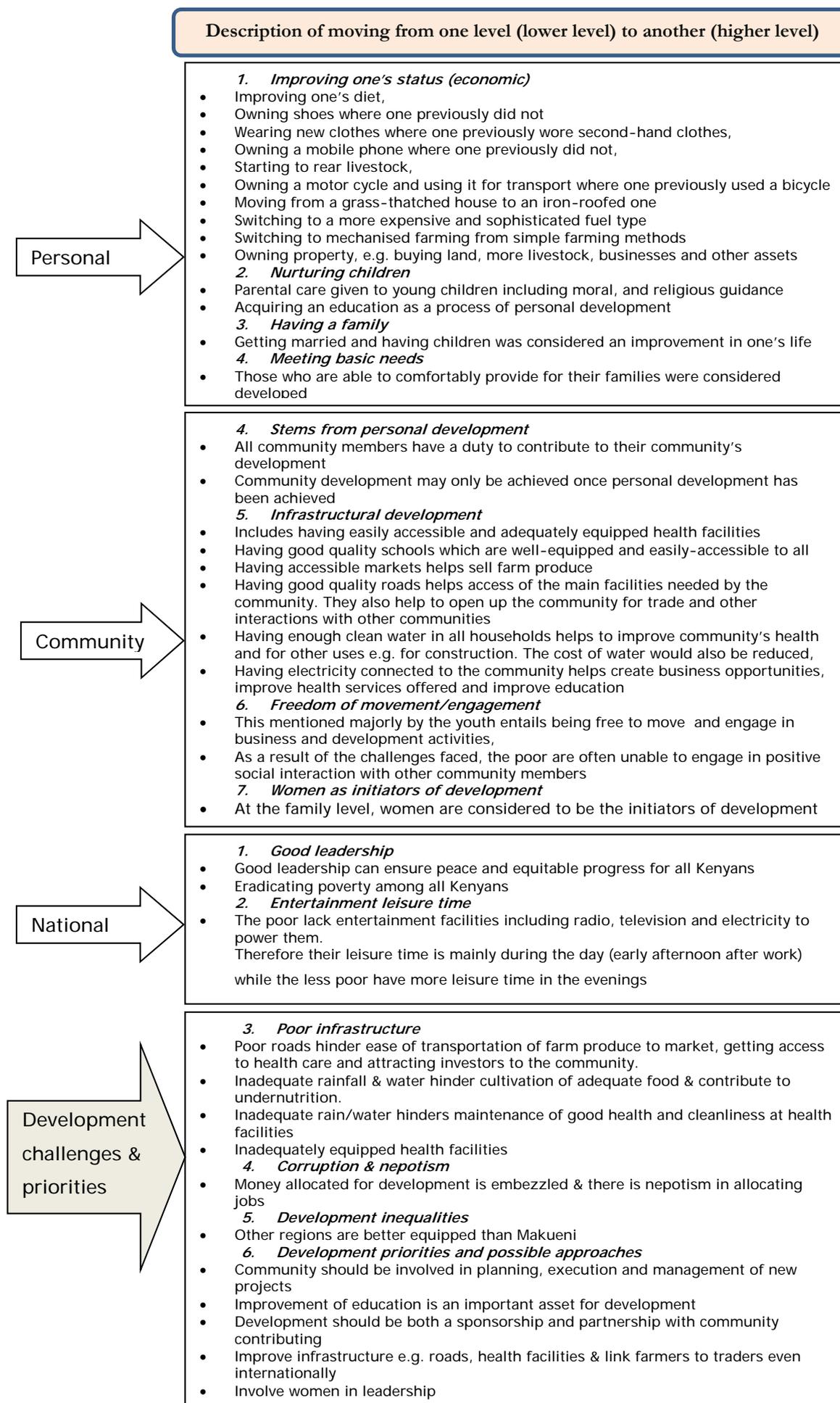
Gender emerged as an important component in regards to how development matters and priorities are perceived by residents of Makueni County. The study found that men and women perceive certain factors of development differently. The factors perceived differently at the personal/household level include eradication of diseases, improved access to health care, improved transport, reduced poverty. Men considered these factors most important compared to women. Women on the other hand considered the rearing of livestock, improved housing, nurture of children and ownership of property to be the most important factors that can signify personal/household development. This indicates that gender mainstreaming in development activities is important.

4.9.6 Development challenges in Makueni County

Poor infrastructure in Makueni was reported as a contributing factor to the community's poor development due to its contribution to the community's impoverishment as well as by denying community members access to vital services including health, water, electricity, education and markets for farm produce and therefore isolating the community and excusing them from the economy. It emerged that there have been attempts at improving infrastructure, particularly relating to the improvement of access to water in the community. The huge costs involved however acted as barriers to the implementation of the projects, thus:

“The main reason why there is persistence of underdevelopment in Ukambani region is the fact that there is a cycle of addressing calamities. This is because the investment needed to address these issues is huge. For example, in 2008, the government carried out a feasibility study conducted to construct a damn in Kitise location of Makueni district in order to pump water from Athi River and well as provide electricity to the region. The cost was however huge and was estimated at 10 billion and this project was suspended” KII, District development official.

Figure 4.9: Author's summary of Makueni community perceptions of development



4.9.7 Perceived custodianship of development

One of the factors of investigated in this study is the perceived custodianship of development as perceived by respondents in the study. These issues were investigated at the three levels; personal/household development, community development and national development (Figure 4.8). Data from the individual interviews show sponsorship by government and donors to be the main route through which personal, community and national development could take place. At the community level however partnerships with government and donors as well as community initiatives were mentioned as some of the channels through which the community could develop. The perception of partnership in development is also shared by the government officials interviewed. Overall, from all respondents of the study, the government was given as the main institution charged with development matters, thus:

“Although the government should be responsible for development, however, if it gets support from other quarters, it is still fine” KII Community leader.

Leaders interviewed viewed development as a partnership where community leaders worked with the government and the international community to bring about change in the areas of interest. The partnership in community development projects was also emphasized as a good approach to development. The community leaders interviewed highlighted the importance of involving all community members, including women to improve the development standing of the community, thus:

“Whenever there is a project to be implemented, my office facilitates the coming together of community members to fundraise for the project. At such times, we may even approach the CDF, LATF etc. and we may also request well-wishers. At the same time, if the government has funds, we can access them. We may also bring women groups together where they plant trees in nurseries to sell so that this money can facilitate the projects” KII Community leader

The importance of partnership in the formative stages of development was also considered to be important, but one that need phasing out over time, such that the community would be fully in charge. These quotes from one of the government representatives interviewed summarises this viewpoint:

“Development should be a partnership between the community, the government and the NGOs. This is important so that there is support in funds for development projects. The community may have

excellent projects that they wish to implement but they may lack funds, in this case, they can access funds from NGOs through the government” KII Community leader

“...the government might not be able to facilitate all the development projects, thus the need for international partnering and networking. International support to [should only] facilitate some projects which cannot be supported by the government, but should not be a permanent issue [international support]... Development is a process and there are various stages like embryonic, emerging, growing and maturity stages. Development in a particular community goes through all these stages and when this development reached the maturity stage, then international support can be faced out and the community should be able to stand on their own” KII Makeni District Government Official.

The qualitative data used in this chapter also indicated that development is majorly the responsibility of the government, working through the various government ministries to improve the living conditions of people in the various areas of jurisdiction. Community leaders further indicated that they were the representatives of the government in development matters at the sub-location level. One of their job requirements was to coordinate development activities in their areas of jurisdiction. This included educating community members on development policies, conducted through sub-locational development committees (SLDC).

Despite respondents articulating development to be a partnership between the citizens, the government and development partners and the role of development partners was however given as only temporal, with the government remaining the constant institution that is preferred by a majority of the respondents, to spearhead development matters. This issue is captured by a community leader:

“When the GOK is able to facilitate its development, then the international community can pull out. As it is now, even though the government is trying, all these efforts are yet to be felt on the local level. But the governments’ efforts are better when reinforced by the other partners” KII Community leader

4.9.8 On-going community development activities

Although it overwhelmingly emerged that development is a partnership between communities, governments and the international community, the role of the community as

a spear-header of development was highlighted as being crucial. This emerged from information from both the community and government officials.

This thesis also investigates the kinds of development activities on-going in the community at the time of the study. It emerged that community development initiatives such as water, roads, education and health are already being undertaken by the government, community members and non-governmental organizations. Community women and youth groups are some of the institutions reported to be involved in development initiatives. These however were reported to be in collaboration with either the government or non-governmental institutions.

Based on the ranking of community felt needs, most of the on-going community projects were geared towards improving the community's living standards, enabling availability of adequate and safe drinking water through the construction of dams, bore-holes and other sources of water, enhancing youth and women employment through income generating activities and improvement of the community's infrastructural outlook, including roads. This quote from a community leader indicates the amount of development initiatives and support reported to have been on-going in the study community:

“We also have groups which we have joined together and they have started some projects e.g. bee keeping, chicken, livestock etc. Other groups have been trained in microfinance. Facilitate the community to improve some infrastructural areas e.g. building of roads voluntarily. This may be donor through the Kazji Kwa Vijana initiative” KII Community leaders

Acknowledging the importance of gender mainstreaming in development activities, the district government officials interviewed cited the on-going efforts to ensure gender capacity building in development projects in the community, thus:

“...we do gender mainstreaming in development where we ensure that in all the projects gender concerns are well-addressed. These include planning convenient time to access services. So the issue is to include both men and women in planning. Also organize gender workshops and ensure all the activities are gender responsive e.g. when doing monitoring, budgeting etc. are gender sensitive and incorporate everybody” KII Makueni District Government Official.

4.9.9 Community engagement in development activities

A range of community capacity building projects was reported to be on-going in Makueni County, incorporating community engagement strategies where communities are involved in determining their felt needs and supported to come up with action plans to implement these projects. In some instances, communities are linked up with either government funding agencies or international funding agencies supporting community development initiatives. The mode of operation adopted in some of these development projects entails a great involvement of community members in determining their needs as well as strengthening a partnership of operation with international support organizations and some government departments/agencies. A quote from one of the government officials interviewed in this study summed up this strategy:

“During the needs identification, started in 2000 after this, and after developing the action plans, now the communities develop proposals. [International Funding Agency] agreed to provide up to Ksh. 500,000 [about 80Ksh=1\$] funding per community...Most communities put up water, enhanced livestock, bee keeping, using the Bamako initiative where community health workers were identified from the community, trained and based on the proposals, the community set up a structure (pharmacy) and dispense drugs for cases that are not very serious, for the most serious ones, are referred to health facilities” KII Makueni District Government Official.

One of the community involvement strategies reportedly employed is the involvement of community in the identification of their needs is through the incorporation of the vulnerable groups in Makueni in providing data about their situation and using the information to design strategies for these groups. A case was given where orphans in the community were interviewed in order to determine the most important problems affecting them, upon which provision of shelter was established to be the most important intervention. In keeping up with the community's culture, where these children were not removed from their communities, separate rooms were constructed for boys and girls at their homes and their families given donkeys, ploughs and oxen to aid in meeting some of the household needs like fetching water and ploughing the farms. In addition, their caregivers were assisted to start bee-keeping projects to cater from the orphans' needs.

Project sustainability was given consideration in some of the projects implemented for the poor in the study community. This study found that the families were allocated some income

generating activities in order to enhance the self-sustaining nature of the strategies implemented for these orphans. This quote confirms this decision:

“But because activities were not self-sustaining, goats were bought so that they can give milk and also can sell some to buy other essentials e.g. uniform. We started with 50 goats and now recently gave out 100 goats. Also once the goats deliver the households give one to a new household. There is also some poultry projects where chicken is kept to improve diet and sell some for income” KII Makueni District Government Official.

In addition, it was reported that support is provided to child-headed households in order to improve wellbeing. Some orphans have their school fees paid while at the same time linking them to some organizations which offer them job opportunities. Other services provided to the vulnerable in the community include psychosocial support, given through counselling sessions.

The other government plans implemented focus on addressing some of the other wellbeing problems experienced in the community by providing focused support to mothers and guardians of children aged below 5 years, and who have poor nutrition. The mothers and guardians were given guidance on appropriate child feeding practices, farming activities with potential to enable adequate food supply in households with young children, food preservation for example through drying of vegetables, building and using local refrigerators, water purification and generally good child care practices.

There are also regular community engagement activities where sensitization is done through Participatory Educational Theatres and where people in the community are requested to perform some skits and involve the community. These drama activities are carried out in order to change the community behaviour.

4.10 Discussion

The purpose of this paper was to investigate how residents of Makueni County perceive poverty and development, with the view of informing development studies. This approach is particularly fitting in a sub-Saharan context where there exists unequal development and where a majority of the population still reside in rural areas and are rarely involved in decisions and actions regarding their felt needs (UN Population Division, 2010). This study,

presenting results from a mixed-methods approach therefore provides a rich and dynamic understanding of poverty and development which has potential in helping development practitioners to focus on communities' development priorities. This is particularly useful in a context like Kenya where these differences exist and where the new devolved governance structures indicate that development practitioners in Makeni County could greatly benefit from results of such a study (Muhula, 2009). Results of this study add to the understanding and conceptualizing of poverty and development by Makeni residents and thereby have potential in informing design of development efforts as inadequate data has been cited as an impediment in design of development initiatives (National Coordinating Agency for Population and Development, 2005).

While both poverty and development were perceived in social, economic, health and socio-economic aspects, those of development were specifically given at personal/household, community and national levels. On the social front, family emerged as key indicators of development where lack of children, failure to get married and the inability to care for one's family were cited as indicators of poverty. Loss associated with orphan hood and widowhood was also reported to be a social contributor and indicator of poverty. Other social indicators highlighting an act of development included getting married, having children and nurturing them morally, religiously and through education/skills' acquisition. Findings by other studies point to similar perceptions of poverty (SHDRP & UNDP, 1998). This study also found psychological health to be an indicator of poverty, a finding which is consistent with a study conducted by Brock, in 23 countries, arguing that peace of mind is as important as wealth in assessing wellbeing (Brock, 1999).

The economic indicators of poverty on the other hand regarding housing, including having small and unkempt houses, and using non-permanent material as well as lacking household utensils constituted poverty. Regarding wellbeing, the poor were reported to: rely on low or irregularly-paying casual (short-term and irregular) work; having children work to help sustain the family, thereby missing or dropping out of school; either wearing torn clothes or not being able to afford these at all or relying on locally made traditional clothing; and lacking cattle and poultry as well as being unable to own any property/assets, including toilets, water-source and electricity. Some personal indicators of development corresponding with these economic indicators of poverty included improvement in food consumption, clothing, rearing livestock, moving from grass-thatched housing to more permanent housing, owning

a mobile phone and other property, improving the household's fuel type and improving farming methods. Other studies conducted to understand perceptions of poverty and development have made findings that are either similar to the present study or that slightly vary because of contextual factors (Barrett, Carter, & Little, 2006; Caizhen, 2010; Saunders, 2003; SHDRP & UNDP, 1998). A study conducted in Tanzania, to understand poverty perceptions in a rural community found that having children, enough food, good health, education, getting married, having adequate clothing and not needing to borrow cooking utensils or clothes, indicated higher wellbeing, although these indicators varied slightly in the various villages enumerated because of cultural and livelihood factors (SHDRP & UNDP, 1998; Tierney, 1997). Other studies present similar perceptions of poverty, including the inability to access adequate food, education, dressing, health care among other measures of deprivation (Narayan et al., 2000). This study's findings reinforce some of the challenges articulated in the Makueni district development plan where orphan hood, disease, disability and environmental conservation are presented as some of the challenges faced (National Coordinating Agency for Population and Development, 2005). The present study however expands the list of challenges and further presents these in order of priority as articulated by the study's respondents.

Similarly, as found in this present study, the importance of water has been reported in another semi-arid setting although water was not ranked as top-priority and also the pathway to development was not as clearly defined as is in this present study (Brock, 1999). Discussants in this study clearly outlined the pathway to development and poverty reduction in the presence of adequate water supply. Its importance was given as an asset that has potential to unlock development in the area, reduce poverty, improve the environment, aid irrigation and therefore enable the community to access adequate food supply, thereby reducing health-related challenges such as malnutrition.

Although the poor are all too often considered powerless in defining their development directions, this study finds that on the contrary, they are either already involved in efforts to improve their lives or would like to be involved in development projects implemented in their area, for instance through provision of ideas, locally available materials or labour. This study also found a well-organized community that carries out development projects using management systems that are determined democratically, including Rotating Credit Associations (ROSCAs) and a management committee that oversees development projects.

Similar findings have been made elsewhere, for instance, in Tanzania, the community was found to engage in ROSCAs, giving evidence of an effective organization, cooperation and management of scarce resources (Tierney, 1997). It is due to such organization that respondents in this study recommend new development projects implemented in their community to be fashioned.

Perceptions of poverty and development vary by context

This study reinforces the existence of variations in perceptions of poverty and development, where the interpretations and indicators are influenced by context (Brock, 1999; Chambers, 2001; Devereux, 2003; M. Green, 2007; Narayan, Chambers, Shah, & Petesch, 2000; SHDRP & UNDP, 1998; Tierney, 1997). Both community members and government district development officials interviewed indicated that development varies by context. In comparison to other areas, Makueni County was reported to be of lower level of development because of high poverty levels, poor infrastructure development and poor health outcomes. Ownership of poultry and livestock as an indicator of wellbeing in Makueni for instance, is also found in Mongolia, the importance of these assets however varies because of different contextual factors (Ebdon, 1995). Makueni residents – being a farming community – consider livestock and poultry to be insurance assets while in Mongolia those having smaller herds were considered to be poor because they are exposed to risk of losing all their stock and were therefore vulnerable to a rapid decline into poverty. In Tanzania, livestock was considered an investment which can be converted into cash, food and other farm implements when needed (SHDRP and UNDP; 1998). Variations in the main means of livelihood therefore influence how poverty or wellbeing and development are perceived since the Mongolian community depends on livestock for subsistence while Makueni and Tanzanian communities engage in farming as a means of livelihood. One other variation can be observed in the reported exploitative nature of offering labour to non-poor households as a sign of poverty. Given the different contexts, in Mongolia, this exploitative type of labour entailed majorly herding livestock for the non-poor families while in Makueni, this centred around tilling the farms or doing home/household chores for the more affluent members of the community (Ebdon, 1995). Further, in Tanzania, it was found that indicators of wellbeing varied slightly in the various villages enumerated depending on their main economic activity (SHDRP & UNDP, 1998). These varying views are therefore likely to also influence how

development and wellbeing may be perceived, supporting the need to approach each context separately.

Lack of land was also considered a sign of poverty by Makueni residents, a finding similar to one in Tanzania where land ownership as a material asset determined an individual's wellbeing (SHDRP & UNDP, 1998). Regarding development, the progress in the mode of transport was considered a sign of progress, like was found in Tanzania (SHDRP & UNDP, 1998). In the present study while some examples depicting developmental progress in transport including switching to a more expensive and efficient means of transport like owning a bicycle where one could previously just walk, or when one bought a motorcycle where they previously relied on a bicycle, or better still buying a car for personal transport where one previously walked, used bicycle or motor cycle, in Tanzania, these various forms of progression were not articulated, rather just the mere ownership of a car depicted one as being wealthy (SHDRP & UNDP, 1998). The size and quality of housing while depicting wellbeing in Makueni, is however influenced by the availability of water to construct bigger structures as most houses are made of mud or bricks. In Tanzania on the other hand, the fear of witchcraft discouraged households from constructing big houses. These findings emphasize the importance of considering culture and context in interpreting poverty and development indicators (SHDRP & UNDP, 1998).

The link between education, poverty and development as found in this study has been widely debated and documented elsewhere. This includes the role of poverty or underdevelopment as a constraint in accessing education as well as low education attainment as an indicator of poverty and therefore a development impediment (Blaug, 1972; Mason & Rozelle, 1998; Tilak, 2002; World Bank, 1995). Tilak (2002) for instance clearly conceptualizes the link between education and earnings through its role in the acquisition of skills and knowledge, employment and productivity (Tilak, 2002). He further illustrates how poor households and communities pay high costs in education attainment and engage in child labour and therefore often encounter opportunity-costs to education. These and poor school infrastructure as well as social and cultural factors at the community level often lead to low rates of participation in schooling, high drop-out rates and failures, low rates of continuation in school and therefore low rates of achievement (Tilak, 2002).

4.11 Conclusion

Following the findings of this study, emphasis is placed on the multidimensionality of poverty and development as perceived by those responding to this study, highlighting the need to refocus attention not just on the monetary measures and indicators of the two phenomena, but also on employing non-monetary and non-quantitative measures and approaches to development plans. This is important for the study of development particularly because perceptions of poverty and development are not specific, rather they vary by context and strategies to address these need to be contextually tailored. It is therefore important for development practitioners to rethink development approaches and refocus on employing more participatory approaches in the understanding of both phenomena, particularly at a micro level and in a setting where variations between and within regions exist. Efforts planned to address poverty and drive development have therefore to first of all understand how these issues are seen by those experiencing them, or those that the efforts seek to benefit. This also helps highlight to development practitioners the importance of approaching each context as a separate entity, requiring more micro-level approaches in the strategies employed to reduce poverty and improve wellbeing. In addition, understanding how these two terms are perceived is important in helping development planners to learn what strategies development-beneficiary communities perceive to be best-suited to their situation and take advantage of the available local expertise and resources. These efforts are important in all aspects considered to be important to the community. This approach is best suited to Kenya and other developing countries where there are huge variations in the infrastructural development, resource availability and cultural orientation. This study therefore reinforces the need for development planners and practitioners to rethink development approaches to more community participatory approaches and employ more micro-level focused approaches in poverty alleviation and development projects in poor contexts like the sub-Saharan Africa.

Part of this paper is published in the *Journal of African Studies and Development*⁹. It is also contained in Appendix 10.

⁹ Essendi, H., Nyovani, M. and Zoe, M. (2014). Perceptions of development by residents of a rural community in Kenya: A capability issue. *Journal of African Studies and Development*, 6(4), 67-77. DOI: 10.5897/JASD2014.0281

5 WHAT FACTORS INFLUENCE PERCEPTION OF DEVELOPMENT IN RURAL KENYA? A STRUCTURAL EQUATION MODELING APPROACH

5.1 Abstract

Data and methods: This chapter uses data collected from 275 individuals in Kitonyoni sub-location, analysed using structural equation modelling techniques to investigate the factors that influence how people perceive development. A perception of development index using 3 statements which relate to perceived development, including optimism about the future of the community and development as a collaborative issues between the community, the government and the international community was computed. This variable was then modelled against some select demographic, socio-economic and perceived variables to assess their influence on perception of development. These variables include perceived importance of electricity in development, perceived household wellbeing and perceived health, after controlling for demographic and socio-economic factors such as age, gender, education, household wealth, parity and health risk factors including alcohol use and smoking. **Results:** Gender, age, perceived household wellbeing and health risk factors (alcohol use and cigarette smoking) were found to significantly influence how people view development. Women and younger people were more optimistic about the prospects of their community's progress. They were also more likely to view development as collaboration between the government, non-governmental community and community members rather than an initiative to be undertaken by one party and were more willing to participate in development initiatives compared to men and older people. Perceived household wellbeing and alcohol use and smoking were also positively associated with perceptions of optimism and collaborative development. **Conclusions:** These results support a participatory approach to development where everyone's voice and input should be considered, as people's perceptions will vary depending on their age, gender and perceived household wellbeing and social behaviour.

5.2 Background

This chapter investigates the socio-economic, demographic and well-being factors influencing perceptions of development. The analytical approach employed is structural equation modeling, considered relevant in this analysis because the main outcome variable,

perception of development is a latent variable, which is unobservable and unmeasurable in the social world. Rather, this variable is computed using a variety of variables measured at the time of data collection. The analysis examines the relationships between perception of development and observed personal, socio-economic and wellbeing variables. Perception of Development was computed using 6 statements administered in the survey, most of which relate to perception of future development of the respondent's community as well as perception of development as a collaborative initiative among various parties, including the government, the international community and the beneficiary community. The relationship between this perception of development and other perceived factors such as perceived importance of electricity in development, perceived household wellbeing and perceived health were examined, after controlling for demographic and socio-economic factors such as age, gender, education, household wealth, parity and health behavioural factors including alcohol use and smoking

5.3 Theoretical approaches

The theoretical approaches used in this study are adopted from the ideas of Sustainable Development Approach and Amartya Sen (Kates et al., 2005; Sen, 1999). In addition, a conceptual framework borrowing from the ideas of a model of financial wellbeing by Porter (1990) is used to guide this chapter (Porter, 1990).

5.3.1 Sustainable Development Approach

Defined as a development approach that seeks to meet the needs of the present populations without compromising the ability of future generations to meet their own needs, sustainable development is argued as the best approach with potential to reduce poverty and improve economies (Kates et al., 2005; Smith & Rees, 1998; United Nations, 1987, 2013a). This approach, arrived at by the World Commission on Environment and Development, having been initiated by the General Assembly of the United Nations in 1982 and published in its report of 1987, is considered as an approach that ensures that environment and development are inseparable things in the quest for development (United Nations, 1987). The United Nations fronted this as the best approach to development following concerns of the continued deterioration of the human environment and the natural resources, making it impossible to achieve both current and future economic and social development. The

organization believes that sustainable development that seeks to meet current needs, while preserving the environment for future generations' needs should become the central guiding principle of development that should be adopted by not just the UN, but also by other development stakeholders, including governments and private institutions (United Nations, 1987, 2013a). It is now the main focus for the post -2015 millennium development goals, indicating its importance in future development approaches in eradicating poverty and helping transform economies (United Nations, 2013a).

This theory emphasizes the need for development actors to avoid the single-handed approaches to development where the quest to address certain needs fails to consider the impact of these actions on the other related aspects. It further emphasizes that consideration be always given on impact of development decision's actions on the environment, the process, the social environment and the allocation of resources. The aim of the approach, it can be argued, is all-inclusive because it incorporates all the factors that are important in the development cycle. The approach also puts into consideration the roles of the various actors in development, in the different contexts to design strategies that are uniquely beneficial to the particular contexts. By default therefore, the approach incorporates the role of development beneficiaries in the development process. In addition, the approach emphasizes the need to balance three groups of objectives (social, economic and environment) in a sustainable development approaches, thereby employing an all-inclusive approach to development (Soubotina & Sheram, 2000). This in turn has great potential to achieve sustainable development. Conversely, ignoring one of these aspects can threaten economic growth as well as the entire development process. In addition, following the argument for people-centred development, this approach incorporates a community element and also views development as both a process and an outcome (Kingsbury et al., 2004).

5.3.2 Amartya Sen's Capability Approach

In addition to the Sustainable Development Approach, this paper employs the Capability approach as articulated in chapter 2, where Amartya Sen (1999) advocates for development to be understood as a process of expanding the real freedoms that people enjoy (Sen, 1999). To Sen, sustainable development can be addressed through the Capability Approach where people's functionings and capabilities, or their freedoms can be improved. He argues heavily against looking at development as just the rise or fall in incomes. Rather, income should be

considered to be valuable only in so far as it can increase people's capabilities thereby aiding their functionings in society (Sen, 1999). Sen also advocates for ensuring that the role of an agent in development efforts and approaches is given importance. In this case, the agent could either be an individual or member of society, who becomes a participant in economic, social and political actions (Sen, 1999). This perspective points to the importance of community participation in development as it enhances empowerment of beneficiary communities (Sen, 1999).

5.3.3 Conceptual framework

The background and theoretical approaches point to a need to revisit the issue of participatory development approach that includes understanding of people's perceptions of development, the factors influencing these perceptions and their participation in development activities in their context. This paper fits a model adapted from The Porter Conceptual Model of Financial Well-Being (Porter & Garman, 1993). This model is adapted after reviewing literature by these and other research on the factors influencing well-being. Although no single approach exists focusing on the factors influencing the perceptions of development, there has been extensive research into the factors influencing the perceptions of well-being, ranging from objective factors such as demographic characteristics to socio-economic characteristics and subjective (perceived) factors (Bristor & Fischer, 1993; Harris-Lacewell & Albertson, 2005; Hayhoe & Wilhelm, 1998; Leach, Hayhoe, & Turner, 1999; Neil, Golden, Millet, & Coogan, 1980; Porter, 1990; Porter & Garman, 1990). Factors influencing perceptions of wellbeing are incorporated in the analysis of this chapter because although perceptions of wellbeing and development are different concepts, they are nevertheless both perceived concepts of improved livelihoods and factors influencing how they are perceived may be similar.

Gender: Among the demographic characteristics argued to have an influence on perceptions of well-being, is gender (Bristor & Fischer, 1993; Hayhoe & Wilhelm, 1998; Mohamad, Hayhoe, & Goh, 2006; Neil et al., 1980). Bristor & Fischer (1993) argue that gender has a big influence on perception of economic well-being (Bristor & Fischer, 1993) due to the engendered roles that individuals are socialised in, hence the need to seek the views of both gender in wellbeing studies. Other researchers have also found gender to have a big impact on perceptions of wellbeing (Hayhoe & Wilhelm, 1998; Leach et al., 1999). Findings of these

studies argue that, in order to clearly understand the perceptions of well-being, researchers need to put into consideration the role that gender plays, as these views are quite engendered (Bristor & Fischer, 1993; Hayhoe & Wilhelm, 1998; Mohamad et al., 2006; Neil et al., 1980). These arguments support those fronted by gender and development theorists who advocate for a gender approach to development (Moser, 1993).

Age: Age of participant has been found to be a significant factor in the perceptions of one's economic well-being. It has therefore been used as a background factor in studies investigating perceptions of well-being (Leach et al., 1999). Leach et al (1999), in their study investigating the factors affecting perceived economic wellbeing of college students found age to be significant in how female students perceived their economic wellbeing (Leach et al., 1999). In the same study, age was not found to be significant in male students' perception of their economic wellbeing. Other perceptions studies focusing on community satisfaction have found age to be an important factor (Dempsey, Thornton, & Baker, 2012; Filkins, Allen, & Cordes, 2000). Filkins et al (2000) found age to be significant, such that as a person aged, they become more satisfied with their community (Filkins et al., 2000). Age is therefore an important demographic variable to be incorporated in running the analysis of the current study as it may influence how those in rural Kenya perceive development.

Other objective factors: While Hayhoe & Wilhelm focus on the variations in perceptions of well-being by men and women at the family setting, they also include other objective variables, that they argue, can potentially contribute to these perceptions (Hayhoe & Wilhelm, 1998). These factors are given both at the individual and household level. They include various factors such as education and health of the participant at the individual level and household income and size at the household level (Filkins et al., 2000).

Education has largely been found to influence one's perceptions of various issues, including financial wellbeing, health risk and environmental risk. A study of perceptions of financial well-being found education to be a major predictor (Kratzer, 1991), while another in rural Nebraska found an increase in educational attainment to be associated with low community satisfaction (Filkins et al., 2000). Porter and Garman (1993) also found when testing a conceptual model of financial well-being, that education is one of the key personal characteristics that determine perceptions of financial wellbeing (Porter & Garman, 1993). Its influence on various aspects of risk-perceptions has also been reported (Chepngeno-Langat, 2013; Doss, Mcpeak, & Barrett, 2008). A study on perception of health vulnerability

in Nairobi for instance found that higher educational achievement influenced higher risk perceptions of contracting HIV (Chepngeno-Langat, 2013), while another study on environmental risk perception found education to have a modest influence on how people perceive different environmental risks (Doss et al., 2008). Although there are mixed results on the importance of education in studies on perceptions, most of the studies reviewed show that it has an influence, and it is therefore fit to test its influence on how those in rural areas of the developing world perceive development.

Health on the other hand is an important objective predictor of economic wellbeing. A study investigating perceived economic wellbeing and participation in financial decision-making found health to influence how husbands perceived their economic wellbeing, although it was not significant for women (Hayhoe, 1990). Hayhoe and Wilhelm (1998) also incorporated the perceived health computed into a latent variable, alongside age, in assessing perceived economic wellbeing in a family setting (Hayhoe & Wilhelm, 1998). The perceived variable measured using a 5-point Likert scale from Very Poor (scored as one) to Excellent (scored as five), is similar to that being used in the current study, also measured on a five-point Likert scale from Very Good (scored as one) to Very Bad (scored as five). This variable is therefore included in this analysis as it is likely to influence one's perception of development in their context.

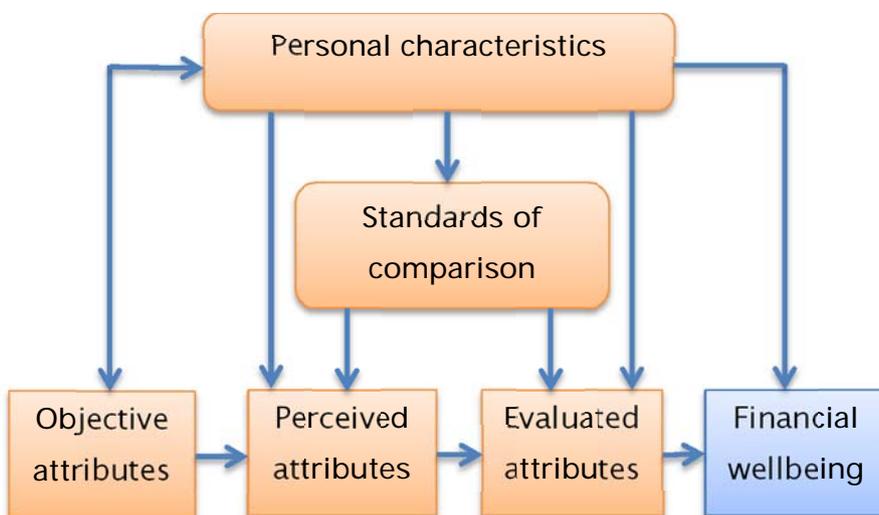
This chapter groups the factors that are likely to influence the perception of development into three blocks; personal characteristics, represented by age, gender, parity, religion, marital status and ethnicity; socio-economic characteristics focusing on household wealth status, respondent's education level and place of residence; objective attributes represented by alcohol use, smoking, nutritional status and contraceptive use, and perceived attributes focusing on perceived health status, perceived household economic wellbeing, perceived neighbours' and friends' economic wellbeing, perceived measure of development (importance of electricity) and perceived general wellbeing (Figure 5.2). The chapter treats perceptions of the importance of electricity as a proxy for perceived development, based on the importance of electricity in socio-economic development (Kanagawa & Nakata, 2008) through such means as creating opportunities for growth (World Bank, 2001). Two community variables (place of residence-district and source of water) are also considered in the descriptive analysis of this paper, although they are not included in the model as these variables do not show variations for the respondents. Place of residence is used to give a

context-background to the interpretation of the results. Source of water at the household on the other hand, is used to show the level of socio-economic status of the community. As postulated by Porter and Garman (1993), perceived factors are used as mediating factors on the effects of the personal and socio-economic characteristics on perception of development. Other studies have used mediating factors in assessing the effects of these primary factors on the outcome variable. Leach et al (1999) used two mediating variables (comparison of Economic Outcomes and Level of Financial Strain) as mediating factors on the effects of individual, socioeconomic and other study-specific variables on the outcome variable (Leach et al., 1999).

This chapter is therefore guided by the principles of the Sustainable Development approach and the Model of Perceived Development to answer thesis research question number 2, which is: “what socio-economic, demographic, community and wellbeing factors influence the perception of development? The study uses the sustainable development approach since it considers each context unique, as highlighted in its emphasis of the consideration of the resources, specifically environmental, community and nature. Anyone adhering to this approach would have to put into consideration the various unique resources in each context. This is in addition, informed by the highlighted intricate interrelationships between the various development issues, implying therefore that it is impossible to study them in isolation and in sequence (Soubbotina & Sheram, 2000), rather, it is important to investigate development issues together in an all-inclusive manner. In this way, it is easy to highlight how they impact each other and also how they combine to negatively impact the lives of the poor. The approach in this paper also views development at the household, community and national levels as interrelated. Further, community participation in development is crucial in the sustainability process and its suitability for this study also lies in the fact that community participation cannot fully be achieved without understanding the communities’ views of development in their contexts. In addition, this approach promises achievement of development that encompasses not just the quantity of income available to a country or a community, but also the distribution of these resources to communities and households. The people’s quality of life, including access to education and health care, employment opportunities, availability of clean air and safe drinking water, the threat of crime, among other aspects depicting the quality of life should be the expected ultimate outcomes in sustainable development.

The model of perceived development used in this analysis is adapted from The Porter Conceptual Model of Financial Well-Being (Porter & Garman, 1990). This model conceptualizes financial wellbeing as a function of personal characteristics, objective attributes, perceived attributes and evaluates the strength of these relationships (Figure 5.1). The choice of the variables in this model was informed by extensive literature review which concluded that perceptions of development, like financial wellbeing may not only be influenced by objective and subjective measures of one’s financial situation, rather, also by one’s perceived objective attributes after comparing these attributes against a standard of comparison previously used in other financial wellbeing studies (Porter & Garman, 1990).

Figure 5.1: The Porter Conceptual Model of Financial Well-Being

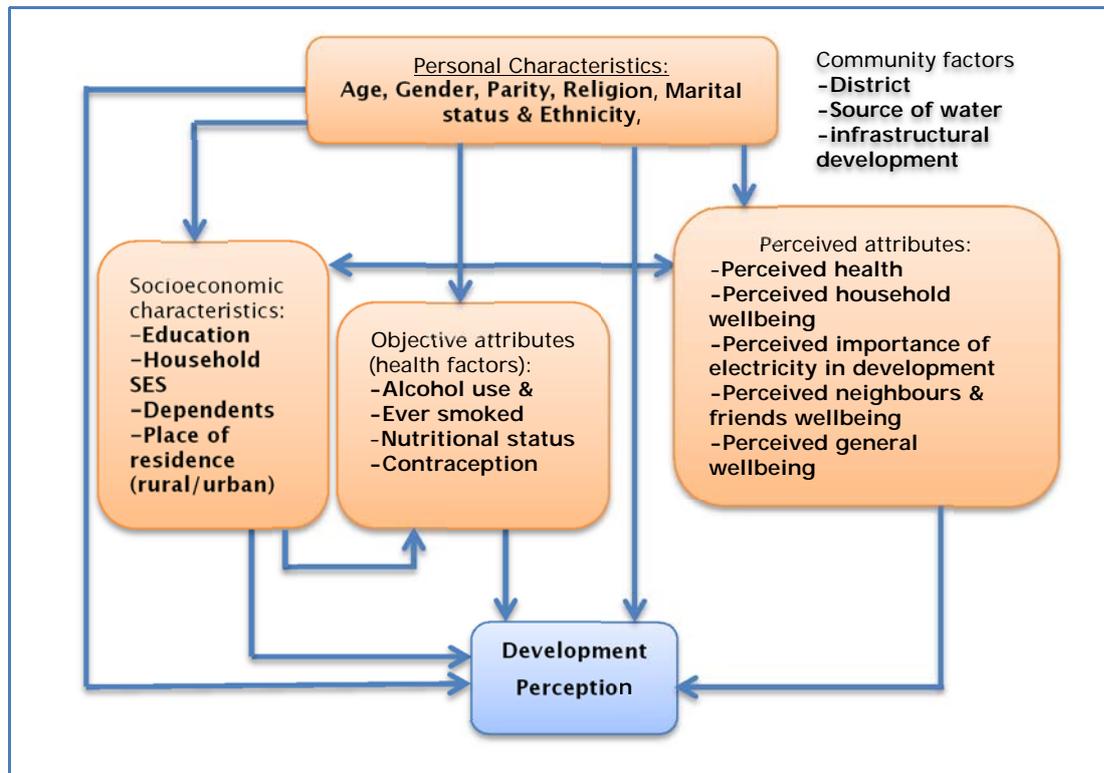


Source: Porter, 1990. Testing a model of financial well-being, Blacksburg, Virginia Polytechnic Institute and State University.

The current study adapts the Porter conceptual model of financial wellbeing and comes up with a model of perceived development to guide the study (Figures 5.1 and 5.2). Some changes were made to the Porter model in order to fit the current study. The modified model retained the personal characteristics block, represented by the respondent’s socio-demographic characteristics, including age, gender, marital status, number of children and religion. These socio-demographic variables were included in the model, following an extensive literature review of studies indicating that they influence how people perceive other aspects of wellbeing, as elaborated in section 5.3.3. The standards of comparison block was replaced by the socio-economic characteristics block comprising respondent’s education

level and their household's wealth status. These variables are included in the Model, in place of the standards of comparison as they have been found to influence perceptions of wellbeing. These variables have also been found to both influence and be influenced by the socio-demographic characteristics, in other studies, thereby being used as mediating variables in this chapter's model. It is expected that an individual's age, gender, marital status, number of children and religion would influence and in turn be influenced by their educational attainment and their household's wealth, an effect that would then influence how they perceive development. The objective attributes block is represented by two objective health outcomes; the respondent's nutritional status and their use of contraception, as one's health has been hypothesised to influence how they perceive development. The perceived attributes block on the other hand has a mix of perceived variables relating to health and development. These are perceived health, perceived household wellbeing, perceived neighbours' wellbeing, perceived general wellbeing and perceived importance of electricity in development. These variables, which are subjective measures, were selected, and included in the model following the assumption that the way an individual assesses their health, individual and household wellbeing and the wellbeing of those around them, is also most likely to influence what they consider important for development in their context. The evaluated attributes block was excluded from this new model as most of the variables included in the Porter Conceptual Model of Financial Well-Being relate to one's assessment of financial attributes judged against other factors. Since the financial attributes are closely related to wellbeing/development attributes, this present study does not therefore seek to make this assessment. The Conceptual Model for Perceived Development includes all the possible variables/factors that are likely to influence perception development.

Figure 5.2: Conceptual Model of Perceived Development



Adapted from: Porter & Garman's Conceptual Model of Financial Well-Being (Porter & Garman, 1993).

While seeking to understand beneficiary communities' views regarding development, incorporating the factors that influence these views can greatly help the Kenyan government, county governments and development practitioners to apply focused approaches in understanding beneficiary communities' felt needs and their perceptions and development priorities thereby designing sustainable strategies that meet the needs of rural communities.

The research presented in this paper seeks to understand factors influencing perceptions of development among members of Kitonyoni sub-location of Makueni County. This study hypothesise that if people think that their communities or country is developing and if they are happy with the approaches to development adopted in development initiatives, they are most likely to participate in development efforts designed for them, which in turn has potential to ensure implemented projects succeed. Based on the proposed model of perceived development (Figure 5.2), this chapter seeks to assess whether there is a significant relationship between the personal characteristics, socio-economic characteristics, health risk

factors and perceived attributes and whether people are optimistic about the development of their community, view development as a collaboration or are willing to participate in development initiatives implemented (Figure 5.3) in order to achieve model fit and then assess the strength of the proposed relationships.

5.4 Data and methods

5.4.1 Data

The chapter uses individual-level data for 275 individuals interviewed in the 290 households sampled in Kitonyoni sub-location for this study. In these households, a total of 294 individual interviews were conducted (Table 5.1). Within the sampled households, a male and female of reproductive age; 18 and 49 years for women and 18 and 54 years for men were selected and interviewed in each household alternately. Questions were asked on household economic status, respondent's education level, parity, perceived health, perceived household wellbeing and perceived importance of electricity in development, smoking and alcohol consumption habits. Out of the 294 individual interviews conducted, cases with missing information were excluded from the sample used in this analysis, bringing the total to 275.

Table 5.1: Demographic and household socio-economic characteristics of sample

Characteristic	N=275	
	n	%
Gender		
Male	135	49.1
Female	140	50.9
Educational status		
Pre-primary/Primary	201	73.1
Secondary+	71	26.1
Age		
18-24 years	74	26.9
25-29 years	57	20.7
30-34 years	44	16.0
35-39 years	37	13.5
40-44 years	33	12.0
45-49 years	30	10.9
Parity (number of children)		
None	60	21.8
1-2	43	15.6
3+	172	62.5
Religion		
Christian	272	98.9
Other	3	1.1
Employment status		
None	228	82.9
Self	22	8.0
Other	25	9.1
Household income (Ksh)- Mean(SD)	5,935.82 (5392.25)	
Housing material (floor)		
Natural	183	66.5
Finished	92	33.5
Source of water at household		
Well (protected)	71	25.8
Unprotected (e.g. surface, unprotected well)	202	73.5
Other	2	0.7

5.4.1.1 Variables in the model

Variables in the model are grouped into 4 as outlined in Table 5.2. These groups are:

1. Observed, endogenous variables
2. Observed, exogenous variables
3. Unobserved, endogenous variables
4. Unobserved, exogenous variables

5.4.1.2 Dependent variable (unobserved endogenous variable)

The outcome variable is perception of development (PerDvlpt) also known as “unobserved endogenous variable” in structural equation modeling terminology. Unobserved endogenous variables are also known as latent variables. Latent variables are not directly measurable. In this study, the perception of development variable was computed using a set of progressive development statements focused on perceived optimism about the community’s progress as well as perception of development as collaboration among partners including the government, development partners, communities and beneficiaries. Partnerships and beneficiaries’ participation in development has been recommended as one of the approaches to achieve success in development initiatives, which are also sustainable (Kingsbury et al., 2004). It was therefore important in this study to understand the views of the community regarding partnerships for development as well their optimism about development in their community. These statements asked on a 5-point scale questions are listed in Table 5.2. They are observed endogenous variables P2, P3 and P7 and are described further:

1. P2: Community development in this area is majorly a responsibility of government. Responses to this statement were: **(1.Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree)**. This statement was administered in order to capture perceived view of development custodianship. Since this statement aimed to capture whether respondents considered themselves and other development partners as important parties in development initiatives, at the analysis stage, the responses were reversed, since those strongly agreeing with the statement for instance, were less likely to perceive their participation or other partners contribution in development initiatives as important, while those strongly disagreeing were likely to hold the view that their participation or other partners’ contribution in development initiatives in their community are important.
2. P3: International community has a responsibility to help in development e.g. climate issues. Responses to this statement were: **(1.Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree)**. This statement sought to determine the perceptions held in regards to partnerships in development, specifically contribution from the international community. Those strongly agreeing with the statement were likely to be consider partnerships in development to be important compared to those strongly disagreeing with the statement.

3. P7: How much do you think that development in your community will improve? (1. Very much 2. Quite a lot 3. Neutral 4. Not much 5. Not at all). This statement sought to assess optimism at the development progress of the study community. In addition to seeking opinion about development collaboration, this study also sought to understand whether those responding were happy with progress of development initiatives in their community.

5.4.1.3 Independent variables

Perceived variables (observed endogenous variables)

The perceived independent variables used in this analysis are observed endogenous variables. In structural equation modeling terminology, endogenous variables are those that are caused by one or more variables in the model. These variables, may also cause other endogenous variables. For the case of observed endogenous variables, these were directly measured at the stage of data collection, using a questionnaire.

Perceived Health (H_{general}): Perceived health was measured using one perceived health indicator that reflected the respondent's assessment of own health. The question asked during data collection was: "How is your health in general? Would you say it is... very good, good, fair, bad, very bad? It was deemed important to assess respondents perceived health, and ultimately the association with perceptions of development as one's health has been found to influence one's perceptions of wellbeing (Filkins et al., 2000).

Perceived Family Wellbeing (HHWB): Perceived family wellbeing was measured using one scale variable reflecting perceived family position on a 10-point wellbeing ladder, where step 1 referred to being at the bottom of the ladder (perceived to be poor) while step 10 referred to those at the top (perceived to be wealthy). Studying perceived household wellbeing and its relationship with perceived development was considered important in this study as wellbeing in general captures other non-economic indicators of development that go beyond such economic measures as standard of living and income. Wellbeing is thus a good approach to understand the other non-economic factors of development as it captures the dynamic aspects of development, mostly non-economic, including the capabilities (Sen, 1999). Understanding how those in rural areas of sub-Saharan Africa perceive their households' wellbeing was thus considered important in understanding their capabilities, as

was found in the first qualitative analysis of this thesis. The initial findings of this thesis (Chapter 4), investigating perceptions of development from a qualitative perspective found that people considered improvement in their individual and household capabilities to be important in the eventual improvement/development at personal, community and national levels (Essendi et al., 2014). It was therefore important to understand these perceptions as well as the relationship between these perceptions and perceptions of development as this would also help understand how one's perceived capabilities relate to their view of development in their context.

Perceived Development Factor (DvlptElec): This endogenous variable refers to whether the respondents perceived electricity to be important in the development of their community. Previous studies have found electricity to be considered a crucial aspect of rural development due to its ability to enable provision and access of crucial services, including health, education, training skills and other services such as clean energy (Ahenkora, 1999; Barnes, 1988). The initial qualitative analysis in this thesis found that the responding community considered electricity to be a crucial resource in facilitating development (Essendi et al., 2014). It's perceived importance stemmed from its ability to help improve communication, and access to important services including health, education and life skills. Having it was also considered an improvement in one's status, thus perceived to be more developed. This analysis therefore sought to understand, from a quantitative perspective, those considering it to be a crucial aspect of development.

Perceived Development (PerDvlpt): The three indicators of perceived development (Table 5.2) focus on perceived progressive development specifically, on optimism about the community's development and development as a collaborative affair between the community, the government and the international community. All the variables contribute factor loadings to the latent variable (PerDvlpt). The statements used to compute this variable all represent a positive attitude towards the partnerships in development, including individuals, community, government and international communities' involvement in development and on the future prospects of the community's improvement.

Other variables (observed exogenous variables)

The other variables used in this analysis are observed exogenous variables, defined as those not influenced by others in the model. The observed exogenous variables in this chapter include wealth, household income, gender, age, parity, education, alcohol use and smoking.

The unobserved exogenous variables, are the residual (error) terms added on every endogenous variable in the model.

The results of this analysis are best understood within the context of the study based on two community factors; place of residence (district) and source of drinking water (Figures 5.2 & 5.5 and Table 5.1). The two community variables indicate a lack of variation in the community. More than a third of household interviewed used an unsafe source of drinking water, indicating the existence of minimal variation in households' socio-economic status. All the respondents also hailed from the same district and were from the Akamba ethnic community. About 99% of the respondents were Christian. Their perceptions were therefore most likely to be influenced by other community members from the same district, ethnic community or religious group.

5.4.2 Methods

This paper uses structural equation modelling (SEM) using the IBM SPSS Amos 20 package (Byrne, 2010). SEM is used in this paper because of the latent nature of the perception of development variable. This is a complex and multi-faceted variable that is neither observable directly nor adequately captured by the use of one variable. SEM's two main assumptions, that the causal processes under investigation are presented by a series of structural (regression) equations; and that these structural relations can be modelled pictorially to enable a clearer conceptualization of the theory under investigation, this paper models the personal, socio-economic and wellbeing factors hypothesised to influence perceived development (Byrne, 2010). The process statistically tests the hypothesised model in a simultaneous analysis of all the variables in the hypothesis to determine the extent to which it is consistent with the data (Byrne, 2010).

5.4.2.1 Running SEM

This was done using a two stage approach. The first model run was Confirmatory Factor Analysis (CFA). This was run to test the measurement model (that is, the model specifying the relationships between the latent variable, in this case PerDvlpt, and the measured variables) and was run first before proceeding with the structural equation model. Running CFA was done in the first stage in order to test whether the relationships specified between the latent variable and the observed variables give a good fit. This is a crucial part of the structural equation models as it gives an indication of how well the proposed model fits the data (Byrne, 2010). If the proposed model fails to fit the data, adjustments have to be made in order to improve the model fit before the proposed relationships can be estimated. Once this was done, Latent Variable Path Analysis (LVPA) which incorporates the relationships between the observed variables and latent variable and the error/residuals, was done.

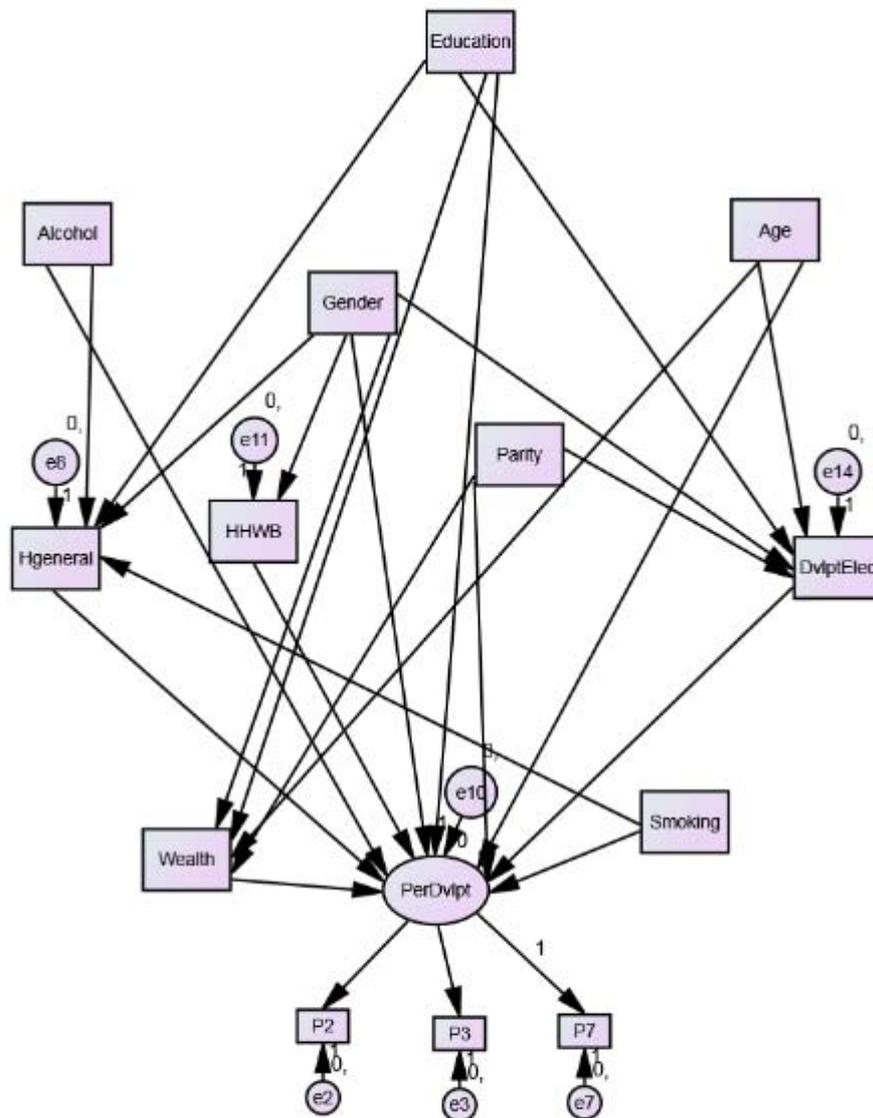
5.4.2.2 Assessment of model fit

The initial step in this analysis was to assess the model's fit, as assessing how best a structural equation model fits the data is one of the most important steps in structural equation modeling (Yuan, 2005). In this study several tests were done to assess how the proposed model fits the data being used in this analysis, based on the recommendations of several researchers (Bentler & Bonnett, 1980; Joreskog, 1993). Chi-square test is one of the recommended goodness of fit tests. The chi-square value in this paper, at 188.809 (df=53) with $p=0.000$, indicates that the model is not a good fit. However, it is also recommended not to only rely on chi-square as the measure of a good fitting model, rather to include other measures such as the Root Mean Squared Error of Approximation (RMSEA), Incremental Fit Index (IFI) and Comparative Fit Index (CFI) (Byrne, 2010). This is because chi-square tests tend to depend on sample sizes while RMSEA takes into account this approximation error (Byrne, 2010). These other goodness of fit tests indicate that the model is a good fit for the data. The (RMSEA) value was 0.045 [0.035, 0.058] indicating that the model is an acceptable fitting model. A RMSEA value of less than .05 is considered an indicator of a good model fit while a value between 0.05 and 0.08 is considered an acceptable fit (Bentler & Bonnett, 1980). The goodness of the assessment of fit was also supported by the high Incremental Fit Index (IFI = 0.834) and Comparative Fit Index (CFI = 0.866) as proposed by Bentler and Bonnett (Bentler & Bonnett, 1980). The CFI and IFI values normally range

from 0 to 1 with 0 indicating the absence of model fit and 1 indicating perfect model fit. A CFI/IFI value of approximately 0.9 can be interpreted as a good model fit. These approaches have previously been used to test model fit in other structural equation models (Gursoy, Jurowski, & Uysal, 2002).

Using these tests of model fit, the model was revised in order to ensure it fitted best by also dropping variables that had correlations of >1.00 and those with negative variances and covariance.

Figure 5.3: Fitted model of perceived development and factors influencing perception of development



The characterization of variables in the model have been simplified (Figure 5.3) by making an assumption that there is no correlation among the predictor variables, that is, among the observed exogenous variables. This assumption can however be checked.

5.5 Descriptive results

Table 5.2: Acronym definitions of variables in the model

Variable	Description/interview question	Mean (SD)/% ¹⁰	Median
<i>Observed, endogenous variables (Scale-level data)</i>			
1. P2	Community development in this area is majorly a responsibility of government (5. Strongly agreed 4. Agree 3. Neutral 2. Disagree 1. Strongly Disagree)	1.96 (0.72)	2
2. P3	International community has a responsibility to help in dvlpt e.g. climate (1. Strongly agreed 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree)	2.95 (1.01)	2
3. P7	How much do you think that development in your community will improve? (1. Very much 2. Quite a lot 3. Neutral 4. Not much 5. Not at all)	1.73 (0.77)	2
4. Hgeneral	How is your health in general? Would you say it is...? (1. Very good 2. Good 3. Fair 4. Bad 5. Very bad)	2.20 (0.29)	2
5. HHWB	Position of respondent's household on a 10-step ladder where the least-developed are on step 1 while most developed on the 10 th step.	2.32 (0.04)	
6. DvlptElec	Whether supply of electricity would constitute development	68.7%	
<i>Observed, exogenous variables</i>			
7. Wealth	If respondent's household is wealthy (2 upper wealth quintiles)	40.4%	
8. Income	Average household income in Ksh @Ksh.85=1\$	5,935.82 (5,392.25)	4,000
9. Gender	Respondent's gender (Male)	49.1%	
10. Age	Respondent's age (continuous variable)	31.17 (9.08)	30
11. Parity	Number of children (If has 1 or 2 children)	15.6%	
12. Education	If respondent had secondary or higher education	26.1%	
13. Alcohol	If respondent uses alcohol	9.8%	
14. Smoking	If respondent had ever smoked	17.1%	
<i>Unobserved, endogenous variables</i>			
15. PerDvlpt	Latent (Outcome variable) computed using P2, P3 and P7 observed variables		
<i>Unobserved, exogenous variables</i>			
Ei	Where i corresponds to variables 1-6 & 15		

A majority of those interviewed agreed with the statement that community development in that area was purely the responsibility of the government (Mean of 1.96 and Median of 2) while the response for the international community's responsibility in development was neutral (Mean of 2.95 and Median of 3). As found in the initial qualitative analysis, this quantitative analysis also found that despite the overwhelming agreement that development

¹⁰ The figures in bold are percentage values of the corresponding variables

was a responsibility of the government, people were willing to participate in development projects (Essendi et al., 2014).

Respondents in this study were almost divided equally, on gender (Table 5.1), with most having only basic education (73.1% had a pre-primary or a primary level of education) and most being 30 years or younger. Other socio-economic assessments of the respondents show that most earned their livelihoods by depending on farming/ subsistence agricultural activities from their farms (82.9%) and had an average family income of Ksh. 5,935.85. Most houses had natural finishing on the flooring and the source of water mainly used was the unprotected ones, specifically surface water and unprotected wells.

5.10.1 Model's parameter estimates

This section presents results of the parameter estimates of perceived development and the statistically significant independent characteristics in the model. The estimated coefficients and associated *p* values for these variables which have either a direct or indirect effect on perception of development are reported in Table 5.3.

Table 5.3: Parameter Estimates of perceived development and independent characteristics

Parameter	Estimate (SE)	
	Direct effect	Indirect effect
Perceived household wellbeing		-0.078 (0.076)*
Age	-0.006 (0.003)*	
Gender	-0.126 (0.058)**	
Alcohol consumption	0.076 (0.055)**	
Ever smoked	0.214 (0.068)*	

* Significant at 5% level ($p < .05$) ** Significant at 1% level ($p < .01$) ***Significant at 0.1% ($p < .001$)

Perceived household wellbeing (HHWB) had a significant effect on perceived development. This effect however indicated a negative direction, where the total effect of household wellbeing on Perception of Development was -0.078 implying that when household wellbeing (HHWB) goes up by 1 measurement scale value, Perception of Development reduces by 0.078 scale values (this is on a scale of 1 to 10). Perceived health (Hgeneral) household wealth and perceived importance of electricity in development on the other hand did not have a significant effect on perceived development. The various effects are: perceived health (0.024), wealth (0.049) and perceived importance of electricity (0.055). These variables

do not have such big effects on perception of development; as perceived health (Hgeneral) and perceived importance of electricity on development (DvlptElec) go up by 1 measurement scale value on a 5-point measurement scale; perception of development (PerDvlpt) goes up by 0.024 scale values and 0.049 measurement scale values respectively.

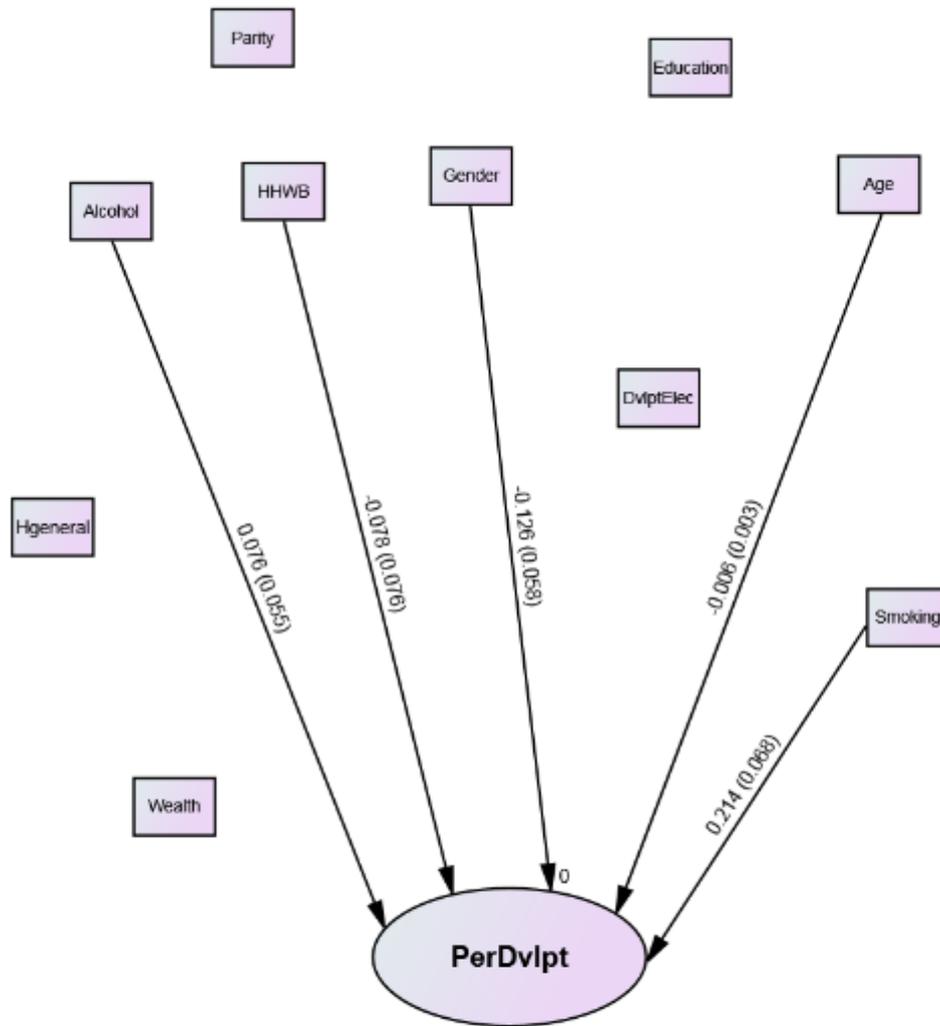
Gender, age and alcohol consumption were the only exogenous (personal and socio-economic characteristics) variables that had significant effects on perception of development (PerDvlpt) with gender having highly significant effect on perceived development. The direct effect of gender on perceived development was -0.126, indicating that women had higher perceptions of development compared to men while that of alcohol consumption on was 0.076.

The effects of age and smoking on perception of development were borderline significant. The effect of age was in the negative direction, at -0.006. This result indicate that the effect of age on perception of development is on a small scale and in the reverse, such that 1 year's increase in age reduces the measurement scale value of perception of development by 0.006 scale values. Younger respondents were therefore likely to report higher perceptions of development regardless of gender, level of education, perceived household wellbeing, perceived health and health risk factors, including cigarette smoking and alcohol consumption. Smoking on the other hand had a 0.214 effect on perception of development.

5.10.2 The determinants of perceptions of development

This section summarises the results of this analysis by presenting both the direct determinants of perceptions of development, as represented by Figure 5.4. There were no indirect determinants from this analysis

Figure 5.4: Determinants of perceptions of development



An analysis of both the direct and indirect determinants of perceptions of development was undertaken. Figure 5.4 gives a summary of the variables that were found to significantly and directly impact perceptions of development. None of the indirect relationships were significant. A direct association was found between age, gender, household wellbeing and

health risk factors (alcohol consumption and smoking), and perceptions of development. One's perceived household wellbeing, that is, the perceived household's position on a wellbeing ladder significantly impacts how they view development, although this effect is in a negative direction. The effect of perceived household wellbeing on Perception of Development was -0.078 implying that respondents who viewed their household to be richer were less likely to be optimistic about development in their community. They were also less likely to consider development as a collaboration where government, international institutions, the community and beneficiaries should all engage. This finding implies that as people viewed their households to be getting richer, their optimism about improvement of their community diminished. Individuals perceiving their households' wellbeing to be improving are also less likely to view development as a partnership where they could participate or where the government would work with other partners, including the beneficiaries to improve their situation (Figure 5.4 and Table 5.3).

The effect of alcohol use on perceived development on the other hand was 0.076 while smoking had a 0.214 effect on perceptions of development. This means that respondents engaging in smoking and alcohol consumption are likely to be optimistic about the development of their community, they are more likely to be ready to contribute to development efforts and they also view development as collaboration between the government, non-governmental organizations, including the international community and development beneficiaries. The effect of alcohol use and smoking on perceptions of development is best understood within the context of study. An assessment of the socio-economic status of the community shows that most had low educational achievement, lived in basic households and used unprotected water sources at their households (Table 5.1). These factors point to a rural community that has limited exposure and one that is therefore likely to also have limited entertainment opportunities. This means that those engaging in smoking and alcohol consumption are therefore likely to congregate in social circles where ideas could be discussed, including development issue, thereby improving their awareness levels and knowledge base regarding development matters in their community. Other than the health risks involved in smoking and alcohol use, these habits are therefore likely to reflect, in part, rural communities' socialization, which improves enables mingling and sharing ideas, and therefore improvement in awareness levels regarding development, and consequently influence their willingness to participate in development initiatives in their community. Those engaging in socialization activities where they congregate with other

members of the community-in the case of this study, this refers to those who used alcohol or smoked- are more likely to be optimistic about development, while also recognizing it as a collaborative effort where results could be best achieved when governments, development partners, communities and beneficiaries all contribute.

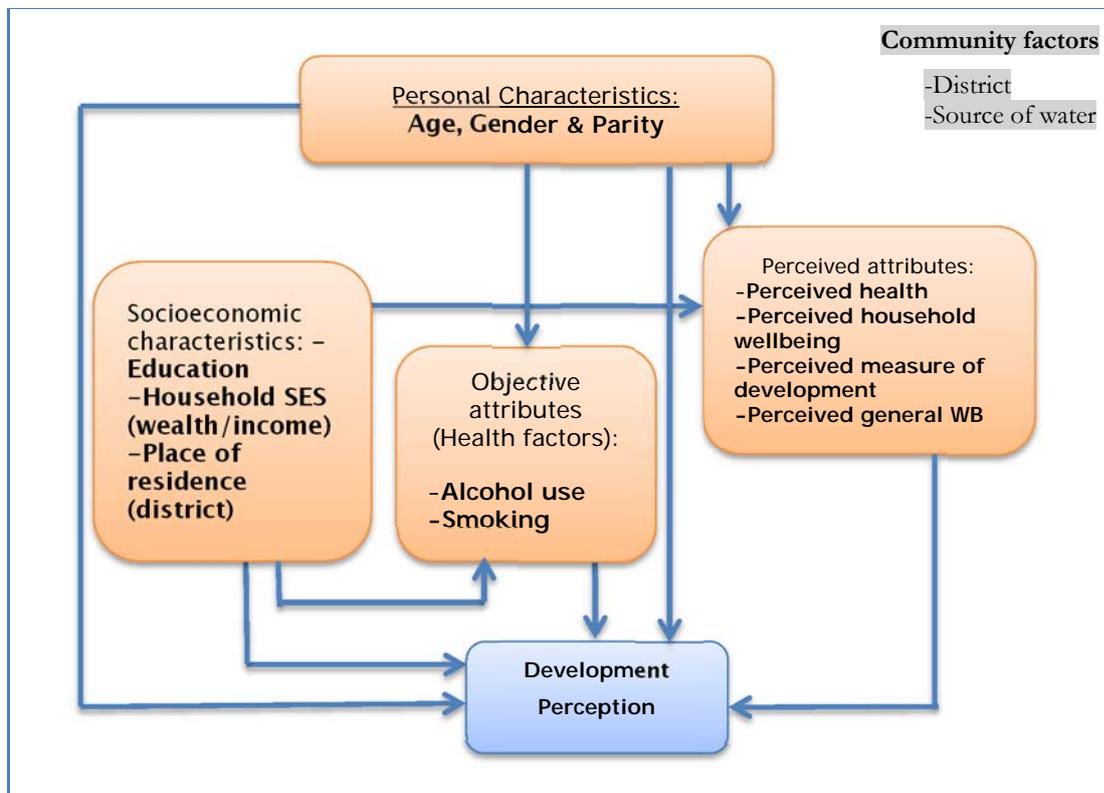
Figure 5.4 also shows that men are less likely to view their households to be well-of compared to women and that these men are also less likely to be optimistic about the development of their community, and also less likely to be willing to participate in development initiatives and compared to women, they are less likely to view development as a partnership where the government, international organizations, the community and beneficiaries could work together to improve the status of the community.

Regarding one's socio-demographic characteristics and perceptions of wellbeing, the number of children an individual has, their education level, their households' wealth and views regarding their health do not influence their views of development. These factors do not determine one's views regarding progress in their community or whether they valued partnerships in development or whether they were satisfied with their level of involvement in development efforts.

5.10.3 Revised Model of perceived development

After fitting the initial model for perceived development and once the results were analysed, some amendments were made to the original model fitted. The decision to amend the model was arrived at after assessing how well the original model fits the data. To do this, the source of misfits in the model had to be identified as proposed by Byrne (2010) where she proposes that a focus be made on the adequacy of the parameter estimates and the model as a whole (Byrne, 2010). Variables that had correlations of >1.00 and those with negative variances and covariance were dropped from the hypothesised model, and a new one done (Figure 5.5) before the model was re-run. Whereas the initial model contained age, gender, parity, religion, marital status and ethnicity in the block of personal characteristics, the final model only contained age, gender and parity. The variable, dependents was eliminated from the socio-economics characteristics block. Further, while nutritional status and contraception were removed from the objective attributes block, the perceived attributes retained four of the original five variables, dropping perceived neighbours wellbeing from the final model.

Figure 5.5: Revised Model of perceived development



Adapted from: Porter & Garman's Conceptual Model of Financial Well-Being (Porter & Garman, 1993).

5.6 Discussion

This study found gender to be highly significant in its association with perceived development; compared to men, women were more optimistic about development in their community. This emphasizes the importance of gender in perceived studies as found elsewhere, especially those investigating factors influencing perception of economic wellbeing (Bristor & Fischer, 1993; Hayhoe & Wilhelm, 1998; Leach et al., 1999; Mohamad et al., 2006; Neil et al., 1980). All these studies highlight the importance of gender as they argue that socialization engenders the viewpoints that men and women have and would therefore influence how they perceived their economic situations. In some of these studies, these analyses are even conducted separately, which differs from the analysis in the present study which had very few data to run the model once the data was split by gender.

Age was also found to be an important determinant of the way people perceive development. Results of the analysis show that as one gets older, they become less optimistic about development in their community. They are also less likely to want to participate in development projects in their communities and do not view development as a partnership where the government, the international community, the local communities and beneficiaries work together to improve their community. Older respondents however had different views regarding important factors that are likely to drive development-compared to younger respondents, older people responding in this study viewed electricity as an important resource in development efforts. Age has been found to be an important determinant of people's views regarding other aspects of wellbeing. Various studies investigating the relationship between age and perceptions of wellbeing have found a significant relationship between one's age and their views of wellbeing (Hayhoe & Wilhelm, 1998). Other perceptions studies focusing on community satisfaction have found age to be an important factor (Demps et al., 2012; Filkins et al., 2000). Filkins et al (2000) found age to be significant, such that as a person aged, they become more satisfied with their community (Filkins et al., 2000).

Although household wealth status in this study did not have a significant effect on perception of development, the same variable, objective economic wellbeing, measured using household income or wealth status has been found to have an impact elsewhere (Bookwalter & Dalenberg, 2004). A study looking at the impact of household factors on subjective wellbeing in South Africa found that different factors were important among groups based on socio-economic status (Bookwalter & Dalenberg, 2004). Although the theme of this paper was not directly related to the present study (perceived development), it nevertheless points to the importance of household wealth. This current study finds the average perceived family position on a 10-step development ladder to be 2.32 with a standard deviation of 0.04 and median of 2, indicating that most people responding in this current study viewed their household's wealth status as being low. In addition, other socio-economic characteristics including access to water, household income, housing material and education status (Table 5.2) point to a poor community. Consequently, these results may influence one's perception of development. Other studies, although focusing on perceptions of one's economic wellbeing have found perceived financial situation, in comparison to friends or neighbours to have a significant effect on one's perceived economic wellbeing (Hayhoe, 1990; Porter & Garman, 1993).

There is need to conduct further research on the wellbeing factors affecting perception of development in a more culturally and economically diverse community in order to adequately assess the impact of these factors on perceived development. This is because some of the studies investigating the factors influencing perceived economic wellbeing do find culture, social class, and ethnicity as important factors in how one perceives their situation because the personal values they hold often lead to differences in these perceptions (Ferree, 1990; Hayhoe & Wilhelm, 1998; Porter & Garman, 1990). A further investigation is therefore needed to develop greater understanding on this important aspect of perceived economic well-being in a culturally, ethnically and economically diverse environment. In addition, further studies putting gender into consideration are needed. This is because since women do report a higher likelihood of economic adversity, it is important to determine what factors contribute to this gender difference. It also is important to study economic adversity's role in affecting perceived economic well-being and to determine if economic adversity, rather than differences in gender values, is the underlying factor affecting perceptions of development.

5.11.1 Limitations of this analysis

The sample size used in this analysis was small and therefore the results need to be interpreted and generalised using caution. In addition, the community of study is quite homogenous in many aspects, making it difficult to have any statistical differences in some of the findings. The community is not diverse culturally, ethnically and religiously, since almost all respondents share the same religion, language and most had not lived outside the community. This would therefore imply that respondents in this study may share similar outlook towards life and their preferred development priorities, as was found in a study in a similar environment (semi-arid) where food security was ranked highest in a semi-arid area (Doss et al., 2008). Indeed Makueni constituency, where the study community lies, being a semi-arid area, contributes the highest percentage of national poverty compared to other constituencies in Eastern province (CBS et al., 2005). The semi-arid nature of the community is likely to have an impact on perceived development, as environment has been found to have a link with people's perceptions of wellbeing, especially in an area such as Makueni, where rainfall variability has been widely recorded (Doss et al., 2008; Gichuki, 2000; Nzioka, 2000). The community also engages in similar livelihood activities, which are predominantly farming, used for subsistence, which could also influence their development priorities

(Nzioka, 2000). Other studies have found culture to be important in perceptions of development, economic wellbeing and in development progress (Harrison & Huntington, 2000; Yenyurt & Townsend, 2003). A study by Dorn D et al (2007), although conducted in a developed context, found culture as measured by language to have an impact on subjective well-being (Dorn, Fischer, Kirchgassner, & Sousa-Poza, 2007).

As gender has a highly significant relationship with perception of development, it would be important to assess the impact of the factors in the model on perception of development separately for males and females. The size of the data in this study was however not sufficient for the model to run when the data are split by gender. Gender indeed has been found to have significant relationship with economic wellbeing in other studies, and the data for males and females were analysed separately (Leach et al., 1999).

This study adapts a model focusing on factors influencing perceived wellbeing as postulated by Porter & Garman's in their Conceptual Model of Financial Well-Being (Porter & Garman, 1993) and incorporating other ideas after reviewing other literature on factors influencing perceived economic wellbeing. This decision is taken because of the absence of an approach on factors influencing perceptions of development. The literature reviewed show that various factors influence well-being including objective factors such as demographic characteristics to socio-economic characteristics and subjective (perceived) factors (Bristor & Fischer, 1993; Harris-Lacewell & Albertson, 2005; Hayhoe & Wilhelm, 1998; Leach et al., 1999; Neil et al., 1980; Porter, 1990; Porter & Garman, 1990). This could be one limitation of the study because perceptions of wellbeing and development are different concepts, which although both highlight aspects of improvement in livelihood, they may also be different because they may represent these concepts at two levels: individual for perceived wellbeing and community for perceived development. This therefore means that more community level-factors would be more fitting in a perception of development model.

5.7 Conclusion

Despite some of the limitations, this study adds to the voice advocating for increased community participation in development, including individuals' perceptions of development in their context. The study contributes to the study of development through the revised model (Figure 5.5) by indicating factors found to be important in the way the rural poor in a developing country context perceive development. This study highlights the importance of

personal, socio-economic and other factors in how the rural poor perceive participation in development, anticipated development outcomes and custodianship of development. It is clear from the results of this study that progress in the community (development) is perceived differently by men and women. This is an important finding for development researchers and students, development planners and implementers as well as policy makers who design projects to benefit communities. The study does not only emphasize the importance of employing participatory approaches in understanding poverty and development among poor communities of developing countries, but also the consideration of the various personal and socio-economic factors of the beneficiaries. Understanding the influencers of perceptions of development that are unique to men and women has potential in informing approaches and development plans that can cater for the needs of both gender separately. This is likely to enhance efficiency in the design of approaches for these groups when encouraging participation in development activities. This would help improve success outcomes of development strategies and development projects implemented in rural poor communities.

This study also has potential to inform development planners, practitioners and policy makers of development on the importance of age in perceptions of personal and community participation in development, future development prospects and custodianship of development. This understanding would help incorporate the views of people of various ages in development projects that have potential to have a great and quick impact on the lives of everyone in a community, regardless of age. In addition, development approaches may need to be tailored to age when encouraging participation in development.

Further, since one's perceptions of household economic wellbeing also have an influence on their perceptions of community development/progress, this result point to the need to incorporate this approach in the understanding of development among the rural poor. It would be important for development actors therefore to design development approaches that would suit community members based on how they view their household's wealth/economic standing.

These findings therefore seek to ensure that development plans are prioritised based on communities' felt needs, but most importantly, the findings offer focus in understanding how the rural poor perceive development. This emphasizes the multidimensionality of development as perceived by respondents in this study, supporting the view that

development goes beyond monetary and quantitative values. And that the concept is a complex one, requiring the need to use non-specific and contextual measures to understand and plan policies focused on communities' perceptions, needs and anticipated development outcomes given their individual and socio-economic characteristics.

In conclusion, this study could be applied to other more culturally diverse contexts and on a larger population where the analysis can be done for men and women separately in order to improve the understanding of the factors influencing development perceptions on gender lines. The same analysis could also incorporate the views of other younger (15-17 years) and older (above 49 years for women and above 54 years for men) persons since age was a factor influencing these perceptions and leaving out the younger or older respondents is effectively shutting them out of development matters, yet the strategies designed for the community would ultimately impact them.

6 DO PERCEPTIONS OF PARTICIPATION IN DEVELOPMENT INFLUENCE FERTILITY CHOICES? EVIDENCE FROM RURAL KENYA

6.1 Abstract

Using data collected from 294 individuals in Kitonyoni sub-location, this chapter seeks to assess the relationship between perceptions of participation in development and fertility (contraceptive use and desired fertility), while controlling for other socio-economic and demographic factors. A perception of participation in development index is computed using three spontaneous responses to the question: “What does development mean to you?” while fertility is defined using contraceptive use and desired fertility. Binary and multinomial logistic regression analyses are used. The study found the odds of using a method of contraception and desiring to have fewer children to correspond with perceptions of participation in development. Individuals viewing development as a participatory approach were significantly more likely to be using at least one modern method of contraception (OR=2.668). In addition, they were significantly more likely to desire to have fewer children; either 1-3 children (OR=2.870) or 4 children (OR=2.040) instead of desiring to have 5 or more children. The baseline total fertility rate in Makueni is 5.1 children per woman. These findings indicate that people who view development to be a participatory engagement where both men and women are involved and when people are satisfied with their communities’ level of involvement in development are likely to make better fertility choices. These findings support the continued involvement of people in development initiatives as this is also likely to lead to improvement of their wellbeing. This approach could be adopted as one of the non-economic indicators and measures of development; it can be used to both measure people’s satisfaction with development initiatives as well as indirectly use it to assess the success of development initiatives.

6.2 Introduction

6.2.1 The state of world development

Despite reports of strong economic growth in most countries in sub-Saharan Africa, an evaluation of the achievement of the MDG goals puts the region well behind other regions (United Nations, 2011a). Rural areas of the region fare even worse. Child health in general is still poor, with rural areas bearing a bigger burden (United Nations, 2012). Although there has been slight improvement in the number of children dying before their 5th birthday in the region, from 174 deaths per 1000 live births to 121 deaths per 1000 live births between 1990 and 2008, this remains high especially in rural sub-Saharan Africa (United Nations, 2012). The pattern is similar in regards to child malnutrition. Rural areas of the region continue to register more cases of child malnutrition, such that children in these areas are twice as likely to be underweight as their urban counterparts (United Nations, 2011a). The percentage of children found to be underweight outweighed that of the urban areas of the region, at 22% and 15% respectively (United Nations, 2012), a challenge exacerbated by the constant food shortages implying that nutritional intake among the already poor and those residing in rural areas of the region is consistently poor (Maxwell, 2001).

Other measures of wellbeing also show poor progress. Fertility decline in the region for instance, has also been slow, despite the proven links between lower fertility and improvement of general wellbeing and ultimately the contribution to sustainable development (Potter, Schmertmann, & Cavenaghi, 2002; Todaro & Smith, 2006). Uncontrolled population growth has been found to impact development through its pressure on creation of wealth at the household, community and national levels, as well as its limiting of the expansion and access to education, health care and other opportunities including children's educational development (Todaro & Smith, 2006; United Nations Development Program, 2005b). Unsustainable population growth also makes it difficult for governments to cater for the needs of the increasing population (Ahlburg, Kelley, & Mason, 1996; Brockerhoff & Brennan, 1998; Global Futures Studies & Research, 2013). An improvement in reproductive health services and choices on the other hand has potential to advance development by helping meet the MDGs #1, #2 and #4 seeking to eradicate poverty and hunger; achieve universal primary education and to reduce child mortality respectively (Todaro & Smith, 2006; United Nations Development Program, 2005b). It has been argued

that smaller families can enable adequate child nutrition and investment in education, which would ultimately enable faster social and economic development at the family, community and national levels (United Nations Development Program, 2005a). In addition, the ability for women to have choices on their reproductive health matters has potential to promote gender equality and women empowerment (MDG #3), while at the same time improving maternal health (MDG #5) and helping combat HIV/AIDS, malaria and other diseases. Improved fertility also has potential to enable access to adequate food, water, housing, sanitation facilities as well as improvement in health and education (United Nations, 2012).

Despite this recognition, many countries in the region still experience poor fertility choices and outcomes. Consequently, most of the countries are either experiencing high fertility or a stall in the decline of their respective fertility rates, yet they also experience the least development progress and poverty decline. Fertility in the region was 5.1 births per woman between 2005 and 2010, a figure that exceeds its replacement level by more than two times (United Nations, 2011c). This fertility's contribution to an increase in the region's population is likely to make it impossible for the countries in the region to advance in development and improve the capabilities of its people, including improving incomes, health education, self-esteem, respect, dignity and freedom to choose (Todaro & Smith, 2006).

6.2.2 Development and wellbeing in Kenya

Kenya is one of the countries in the region showing slow progress not only in the control of its population growth, but also in its development progress. Although the country recently rebased its GDP growth for 2014, revising it from the earlier projected value of \$44.10 billion to \$56.3 billion, the other measures of social development and wellbeing are still poor (World Bank, 2014). Its gross national income (GNI) per capita was estimated to be US \$ 1,246 in 2013 (World Bank, 2014), while its Human Development Index (HDI), a composite measure of three basic dimensions of human development: health, education and income was 0.535 in 2013 (UNDP, 2011). Consequently, the country is not only ranked 147th out of 187 countries in human development, it also faces regional inequalities in development including in infrastructure, health and education (CBS et al., 2005; World Bank, 2009). The country was indeed reported to have one of the highest Gini co-efficient in Africa in 2009, with nearly a half of its citizens living in poverty (World Bank, 2009). These development inequalities go beyond the regions and are clearly pronounced between rural and urban Kenya where fertility outcomes also show inequalities. These outcomes persist despite the implementation of

various programs to reduce fertility and improve the use of contraception (United Nations Development Program, 2005a).

6.2.2.1 Fertility and development

While the Kenyan government has attempted to resolve fertility through various strategies, including creating government agencies to specifically handle population issues separately from other health issues, the results have been quite slow. Although family planning was incorporated in the country's 1965 development agenda, a step that ensured that total fertility rate reduced from 8 children in 1980s to 4.7 in 1990s, these gains were however eroded when this focus and funding was shifted from fertility to other health issues, including HIV/AIDS (Republic of Kenya, 2007b). Consequently total fertility rate (TFR) started to rise again, reaching 4.9 children per woman in 2000s, while contraceptive prevalence rate which had been increasing annually at 6% also stalled at 39% (Republic of Kenya, 2007b). Although additional efforts to improve the state of fertility in the country, including starting government departments specifically focusing on reproductive health and fertility issues have been strengthened, there are still some weaknesses in these efforts. There are some gaps in the current development policy approaches which have failed to explicitly incorporate strategies directly targeting fertility. Kenya's Vision 2030, one of the important current development strategies which comprises a set of strategies seeking to drive the economy to a middle income status by 2030 for instance, does not have plans to address population issues (Republic of Kenya, 2007b). This is despite the association between the country's population growth rate and the achievement of the goals in this plan. The other newer government policy documents and guidelines have attempted to address these gaps, however the contribution of the community in development efforts is still missing (National Council for Population and Development, 2013). Gender, another important factor in the success of fertility/population programs in the country has not been adequately incorporated in the design and implementation of these programs. Although both men and women are users of contraceptive products in the country and despite the important role that men play in decision-making regarding birth control measures, male involvement has not very prominent in decisions, opinions and perceptions regarding the products and services (Omondi-Odhiambo, 1997). Yet the country's population continues to increase at an unsustainable rate which may make it difficult to achieve these development plans.

6.2.2.2 Why focus on fertility and development?

Fertility is therefore a major focus in this study as population is both a facilitator and beneficiary of development whereby uncontrolled population growth has been found to negatively impact development progress and poor development progress also impacts fertility (Gilles et al., 1996; Ray, 1998; Todaro & Smith, 2006). A look at the fertility rates of most developing countries and developed countries demonstrates this link. While most developed countries can be said to have completed fertility transition with crude birth rates of below 20 and less than 1% of natural increase, many developing countries still grapple with high population growth rates (Population Reference Bureau, 2012). Currently, developing countries account for the greatest increase in population growth worldwide, where crude birth rates are still high and where fertility decline has either stalled or is yet to happen and where most of the population is young, putting a strain on the available resources (Population Reference Bureau, 2012). In addition, many of the developing countries with high population increase are the poorest, facing such challenges as low incomes, high economic vulnerability, and poor human development indicators such as low life expectancy at birth, very low per capita income, and low levels of education (Haub, 2012). While some regions such as Asia have made the greatest effort in fertility decline, 33 of the 48 poorest countries experiencing high fertility are in sub-Saharan Africa (Haub, 2012). The continent has experienced high population growth rates in the last few decades, a situation that has impacted the ability of many African governments to cater for the increasing populations by providing adequate health, education, housing and infrastructure and employment opportunities resources (Population Reference Bureau, 2012). The continent is further expected to contribute the greatest percentage increase of population by 2015. This therefore necessitates an urgent need to mitigate this unprecedented increase especially since only 20% of married women in sub-Saharan Africa use a modern form of family planning, the lowest rate in the world (Population Reference Bureau, 2012).

To achieve sustainable development and improve wellbeing as proposed by the United Nation's millennium development goals, there is need to work at reducing population growth, as well as investing in universal health care including providing adequate reproductive health services as well as investment in education and gender equality (United Nations Population Fund, 2013). The United Nations Population Fund cites various ways in which sustainable development could be achieved with reduction in fertility. Figure 6.1 gives

a summary of the factors considered to be potential outcomes of reduced fertility, thereby impacting development.

Figure 6.1: Potential benefits of reduced fertility on development

- Enabling people to have fewer children contributes to upward mobility and helps to stimulate development.
- When women can negotiate their reproductive health decisions with men, this exercise of their rights leads to an increased decision-making role within families and communities that benefits all.
- Because smaller families share income among fewer people, average per-capita income increases.
- Fewer pregnancies lead to lower maternal mortality and morbidity and often to more education and economic opportunities for women. These, in turn, can lead to higher family income.
- As women become more educated, they tend to have fewer children, and participate more fully in the labour market.
- Families with lower fertility are better able to invest in the health and education of each child. Spaced births and fewer pregnancies overall improve child survival.
- Investments in reproductive health, particularly in family planning, that result in lowered fertility can open a one-time only 'demographic window' of economic opportunity. This is characterised by fewer dependent children and a large and healthier workforce.

Source: (United Nations Population Fund, 2013)

Despite the potential for reduced fertility to spur economic growth (development) and improvement in wellbeing (Figure 6.1), a significant population of women in the reproductive age and who require contraception, do not use any, particularly in developing countries. The World Health Organization reports that about 222 million women in developing countries who report a desire to delay or stop child-bearing do not use any method of contraception (World Health Organization, 2013a). This gap exists despite the proved benefits including the potential of contraception to improve the women and children's wellbeing. Access to reliable and effective modern methods of contraception can contribute to reduced abortion incidences, reduced maternal morbidity and mortality and reduced child morbidity and mortality and consequently a reduction of the burden of disease, all factors that can contribute to the development of the households, communities and countries (World Health Organization, 2013a). However, many women in developing countries continue to die because they lack access to contraception forcing them to either

undertake unsafe abortions or putting their lives and those of the unborn babies at risk of maternal and new-born morbidity and mortality (UNFPA, 2013a).

6.2.3 Refocusing development approaches

This persisting situation therefore calls for more innovative approaches that could help address both development and fertility, given the relationship between the two issues. There is need to revisit development and look into alternative development approaches that have the potential to drive development and ensure an improvement in Wellbeing. Considering the poor development progress of many countries in sub-Saharan Africa and the gaps in the development approaches employed, this study focuses on people's involvement in development, through the seeking of their perceptions of participation in development and links these perceptions with their fertility choices. This approach could thus help inform the design of development and wellbeing programs, particularly for countries in sub-Saharan Africa.

Given all the benefits of improved fertility highlighted in the background, this paper focuses on the relationship between perceptions of development and fertility choices as a possible alternative approach to development. The paper lobbies for the incorporation of more non-monetary measures, indicators and approaches to development, including participatory development as this may have potential in improving people's worldview as well as enabling make better choices in regards to their fertility. We hypothesize that people perceiving development to be participatory are more likely to also participate in development if given a chance, and are also likely to make better fertility choices. This study adopts the definition of community **perceptions of development as the empowerment and involvement of the socially and economically marginalized peoples in decision making over their own lives** (Chambers, 2005; Guijt & Shah, 1998; Kingsbury et al., 2004; Sen, 1999). This definition is informed by Amartya Sen's Capability Approach where the improvement of people's capabilities through empowerment, enabling them lead better lives is viewed as a prerequisite in development and in the improvement of a people's wellbeing (Sen, 1999). Proponents of the community perceptions approach which also has potential to promote community participation in development projects argue that this has potential to reduce communities' dependence on donor-supported programmes while understanding and making use of the communities' resources and capacities needed to drive development on a

sustainable basis (Chambers, 1981, 1983). Outcomes of such an initiative have potential to ensure that communities' views and opinions are incorporated in development plans and initiatives and that these plans and initiatives are sustainable (Kingsbury et al., 2004).

6.3 Data and methods

6.3.1 Data

This chapter uses data collected from 290 households in Kitonyoni sub-location to answer this thesis's research question number 3: "Are perceptions of development associated with wellbeing outcomes, specifically fertility choices?". A total of 294 individuals from these households were interviewed and their data used in this analysis. Within the sampled households, a male and female of reproductive age were selected and interviewed in each household alternately, making a total sample of 150 men and 144 women (Table 6.3). These respondents were aged between 18 and 49 years for women and 18 and 54 years for men. Questions were asked on household economic status, respondent's education level, parity, perceived health, perceived household wellbeing and perceived development.

6.3.2 Methods of data analysis

Descriptive statistics are used to assess the distribution, frequency of responses and the range of values for all the variables used in the study. The study also employs bivariate analysis to investigate the relationship between the variables of interest in the chapter. In the bivariate analysis, chi-square test is used to assess the independence of these variables. This chapter also uses logistic regression to assess the relationship between the predictor and outcome variables. Logit models are fitted to assess the relationship between perception of development and contraception use, as the contraception variable is binary. The study also employs the multinomial logistic regression to assess the relationship between perception of development and desired fertility, a nominal variable with more than two categories.

6.3.2.1 Measurement of perception of development (main predictor variable)

This study's main predictor variable is the perception of development, measured using three questions/statements administered in the study and which refer to the respondent's perception of participation in development. Three development related questions were administered. These include "What does personal development mean to you?", "And now,

what factors are important for your community's development or what does community development mean to you?" and "And now, what factors are important for your country's development or what does national development mean to you". As this chapter investigates the perceptions of development and relates these with a personal health issue (fertility), this analysis focused on the responses relating to personal development to which three of the responses directly relating to perception of participation in development and which sought spontaneous responses were used in this analysis. The responses are:

- i. Development entails involving everyone in development (1. Yes 0. No)
- ii. Development entails involving women in leadership (1. Yes 0. No)
- iii. People in the community are normally involved in community development (1. Yes 0. No)

These three variables are then used to compute a perception of development index that depicts respondents' perceived participation/involvement in development. The index, computed using factor analysis was then assessed against the main wellbeing variables under investigation in this study, which are use of contraception and desired fertility.

6.3.2.2 Other explanatory variables

Table 6.3 below gives a description of the variables used in the analysis in this paper and their frequency distributions.

6.3.2.3 Outcome (dependent) variables in the analysis

This paper comprises 2 main outcome predictors of fertility choices; contraception use and desired fertility. These variables are detailed below:

Contraceptive use: This referred to use of any modern means of birth control, including combined or progesterone only oral contraceptives (or the pill), combined or progesterone only injectables, implants, intrauterine copper or hormonal devices, male and female condoms, male (vasectomy) and female (tubal ligation) sterilization, lactational amenorrhoea method and emergency contraception (World Health Organization, 2013a).

Desired fertility: This was defined as the reported number of children that a respondent desired to have. This applied both to those with and without children. Those with children were asked about their desired number of children before the start of their child-bearing

while those without children were asked what their desired number of children was before their start of child bearing.

6.4 Results

6.4.1 Descriptive statistics

Predictor variable

Principle components analysis was used to compute the perception of development index. Table 6.1 presents the eigenvalues, which shows that the first factor explained 42% of the variance, the second factor 33% of the variance, and a third factor 25% of the variance. Further, Table 6.2 presents the index's factor loading matrix and communalities.

The first part of the analysis presents results of descriptive statistics of the various wellbeing factors in the analysis, including a description of the variables and the frequency distribution of the accompanying responses.

Table 6.1: Total Variance of perception of development index explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.261	42.041	42.041	1.261	42.041	42.041
2	1.003	33.420	75.461	1.003	33.420	75.461
3	.736	24.539	100.000			

*1= Development entails involving women

2= Development is involving everyone

3= People in the community are normally involved in development matters

Table 6.2: Factor loadings and communalities of perception of development index

	Component		Communa lity
	1	2	
Development entails involving women	-.128	.983	.984
Development is involving everyone	.782	.186	.646
People in the community are normally involved in development matters	.796	-.025	.634

Explanatory variables

The variables are categorised into three; *socio-demographic factors*, *socio-economic factors* and *health factors (outcome variables)*. The socio-demographic factors used in this analysis include sex and age of respondents. It was expected that perceptions of development would indirectly operate through respondent's sex and age to influence health outcomes. Indeed the second paper in this thesis (chapter 5) found sex and age to have a major influence of perceptions of development and it was expected that these two variables would therefore be vital in fertility outcomes, given the respondent's perceptions of development. Socio-economic factors include educational status of respondents, household income, employment status and source of water for drinking at the household. These factors were expected to influence how perceptions of development impact health outcomes as found by various researchers. Factors found to influence fertility include socio-economic factors such as wealth and educational attainment as well as socio-demographic factors such as age and parity (Bongaarts, 1978). It was therefore found necessary to include these factors in both the binary and multinomial logistic regression models.

Desired fertility was categorised into; 1, if respondent had *1-3 children*, 2, if respondent had *4 children* and 3, if respondent had *5+ children* while contraception use was a binary variable, categorised into *1: Yes*, if any modern method of contraception was used and *0: No* if no modern method of contraception was used.

Table 6.3: Demographic and socio-economic characteristics of respondents (Source: Household survey data, Kitonyoni 2011 & 2012)

Characteristic	N=294		Description
	n	%	
Socio-demographic factors			
Sex			Dichotomous variable of males (18-54 yrs.) and female (18-49 yrs.) adult respondents
Male	150	51.0	
Female	144	49.0	
Age of respondent			Adult respondent's age categorised into 10 year age groups, except the 18-24 age group. The last group was either 45-49 years for female respondents or 45-54 for males
18-24 years	76	26.0	
25-34 years	101	34.6	
35-44 years	70	24.0	
45+ years	45	15.4	
Socio-economic factors			
Educational status			The highest education level attained coded as; <i>pre-primary/ primary</i> and <i>secondary+</i>
Pre-primary/Primary	215	74.9	
Secondary+	72	25.1	
Parity (no. of children)			Respondent's number of children
None	63	21.4	
1-2 children	46	15.7	
3+ children	185	62.9	
Desired parity			Desired number of children
1-3 children	60	20.4	
4 children	141	48.0	
5+ children	93	31.6	
Household income (Ksh)- Mean(SD)	5,935.82 (5,392.25)		Household income was a continuous variable whose mean and standard deviation was computed and then categorised into; <Ksh 5,000, Ksh. 5,000-9,999 & Ksh. 10,000+
Source of water at household			Type of source for drinking water was categorised into various options (See Appendix 9) and at analysis this was categorised into protected & unprotected
Protected (e.g. protected well)	75	25.5	
Unprotected (e.g. surface, unprotected well)	219	74.5	

The distribution of adult respondents by gender was almost equal (Table 6.3). In addition, less than a third of the population (25.1) had acquired either a secondary or higher education. The mean household monthly income was about Ksh. 6,000 (1£=Ksh. 130), while only 25.5% of households used a protected source of drinking water such as protected wells.

6.4.2 Results of the logistic regression analysis

6.4.2.1 Perception of development and fertility

Contraceptive use

This study hypothesised that perceptions of participatory development have an association with better fertility choices, specifically use of contraception and the desire to have fewer children. Table 6.4 presents the odds of using any method of contraception when holding perceptions of participatory development, based on the perception index computed. This relationship is highly significant. The study finds the odds of using a method of contraception to be high with an improvement in the perception of development (OR=2.668). These odds increase further when demographic, socio-economic and fertility factors are controlled for in the model (OR=3.036). With the exception of parity, none of these additional variables were significant in the use of contraception. Female respondents however had higher odds of using contraception (OR=1.000 VS. OR=0.775 for men). The odds of using contraception reduced with age (OR=0.995) while married respondents were more likely to use contraception compared to the unmarried (OR=1.171 vs. OR=1.000 for unmarried respondents).

Regarding the influence of socio-economic factors, those with primary education were less likely to use contraception compared to those with secondary or higher (OR=1.000 compared to the OR=1.629 for those with secondary education). Income had a big influence on whether respondents used contraception. For every unit increase in income (Ksh.), the odds of using contraception increased (OR=2.237). Those using a protected source of drinking water at the household were about 6 times more likely to use contraception compared to those who did not use a protected water source (OR=5.999).

When parity was considered, respondents who had ever had a child were more likely to use contraception compared to those without any child. Those who had between 1 and 3 children were about as likely to use contraception as those without (OR=1.116 vs. OR=1.000 for those without children) while those with 4 children or more were about one a half times more likely to use contraception compared to those without (OR=1.402).

Table 6.4: Results of logistic regression analysis on the effects of perception of development on the use of contraception (Source: Household survey data, Kitonyoni 2011 & 2012)

Determinants	Model With Perception Only		Full Model	
	Odds ratios	P-value significance	Odds ratios	P-value significance
Intercept	2.851	***	3.465	
Perception of development	2.668	***	3.036	**
Socio-demographic factors				
Sex (Female)			0.775	NS
Age			0.995	NS
Married			1.171	NS
Socio-economic characteristics				
Education level (Ref: Primary)			1.629	NS
Use of protected source of water at the household			5.999	NS
Household income			2.237	NS
Parity (Ref: No child)			1.000	
1-3 children			1.116	***
4+ children			1.402	***
Model χ^2			66.239	
Df			9	
P-value			0.000	
N			294	
R ²			0.304	

Significance levels *** <0.001; ** <0.01; * <0.05 NS- Not significant

Desired fertility

Multinomial logistic regression to assess the association between perception of development and desired fertility was done using the multinomial logit model in IBM SPSS version 20. The choice to use multinomial logistic regression was made because the outcome variable (desired fertility) was grouped into three categories: desire to have 1-3 children; desire to have 4 children and desire to have 5 or more children.

This analysis uses desired fertility instead of achieved parity because out of the respondents in the study, 21.4% had no children (Table 6.3). From the descriptive statistics in Table 6.3, about 50% of respondents indicated 4 as the desired number of children, hence the three categories. The regression model compares the multinomial logistic regression results of those who desired to have either 1-3 children or 4 children with those who desired to have more than 4 children (Table 6.5). Respondents who perceived development to be participatory were about 3 times more likely to desire to have 1-3 children as opposed to 5

or more children (OR=2.870). Those who held these views of development were also significantly less likely to desire to have 4 children instead of 1-3 children (OR=0.348 vs. 1.000). Similarly those with perceptions of participatory development were about two times likely to desire 4 children instead of 5 or more children (OR=2.040). In addition, among those respondents with perceptions of participating in development, women were more likely to desire fewer children than men; (OR=1.000 for women vs. OR=0.565 for men) desiring to have 1-3 children, (OR=1.000 for women vs. OR=0.493 for men) desiring to have 4 children and OR=1.000 for women vs. OR=1.771 for men amongst those desiring to have 4 children instead of 1-3. As respondents got older, the desire to have fewer children diminished; OR=0.950 for those desiring to have 1-3 children instead of 5 or more, OR=0.965 for those desiring to have 4 children instead of 5 or more and OR=1.053 for respondents desiring to have 4 children instead of 1-3. The unmarried respondents were significantly more likely to desire to have 1-3 children and not 5 or more (OR=1.000 for unmarried respondents compared to OR=0.246 for married respondents) compared to the unmarried ones. Although not significant, the pattern was the same for those desiring to have 4 children as opposed to 5 or more children, whose odds ratio was 1.000 for the unmarried and odd of 0.415 for married respondents. The odds of desiring to have 4 children or less, instead of 5 or more also varied by education, with those with secondary education desiring to have fewer children than those with only primary level of education (OR=1.053 for those desiring to have 1-3 children and OR=1.656 for those desiring to have 4 children instead of 5 or more). An increase in household income also corresponded with the desire to have fewer children (OR=1.347 for those desiring to have 1-3 children and OR=1.038 for those desiring to have 4 children instead of 5 or more). Using safe drinking water at the household corresponded with the desire to want fewer children. The odds of wanting to have only 1-3 children instead of 5 or more when a respondent used a safe source of drinking water were 1.000 vs. 0.739 for those without a safe source of drinking water. The pattern was the same for those desiring to have 4 children instead of 5 or more (OR=1.000 for those with a safe source of water vs. OR=0.315 for those without a safe water source). Respondents using contraception were more likely to desire to have fewer children compared to those not using any form of birth control method. The odds of desiring to have 1-3 children as opposed to 5 children was 1.693 while those of desiring to have 4 children as opposed to 5 or more was 1.414 when a modern method of contraception was used.

Table 6.5: Results of multinomial logistic regression analysis on the effects of perception of development on desired fertility

Determinants	Odds Ratio	95% Confidence Intervals for Odds Ratio		
		P-value significance	Lower	Upper
Odds of desiring 1-3 children vs. 5+ children				
Intercept		***		
Perception of participatory development	2.870	**	1.251	6.584
Socio-demographic factors				
Sex (Ref: Female)	0.565	NS	0.264	1.206
Age	0.950	***	0.915	0.985
Marital status (Ref: Married)	0.246	*	0.061	0.992
Socio-economic characteristics				
Education level (Ref: Primary)	1.053	NS	0.439	2.525
Household income	1.347	NS	0.437	4.152
Use of water at household (Ref: Protected)	0.739	NS	0.094	5.836
Other factors				
Use of contraception (Ref: No contraception)	1.693	NS	0.534	5.366
Odds of desiring 4 children vs. 1-3 children				
Intercept		NS		
Perception of participatory development	0.348	*	0.152	0.799
Socio-demographic factors				
Sex (Ref: Female)	1.771	NS	0.829	3.783
Age	1.053	**	1.015	1.093
Marital status (Ref: Married)	4.066	*	1.008	6.390
Socio-economic characteristics				
Education level (Ref: Primary)	0.950	NS	0.396	2.276
Household income	0.743	NS	0.241	2.289
Source of water at household (Ref: Protected)	1.352	NS	0.171	1.674
Other factors				
Use of contraception (Ref: No contraception)	0.591	NS	0.186	1.873
Odds of having 4 children vs. 5+ children				
Intercept		**		
Perception of participatory development	2.040	**	0.999	4.163
Socio-demographic factors				
Sex (Ref: Female)	0.493	*	0.268	0.905
Age	0.965	*	0.937	0.993
Marital status (Ref: Married)	0.415	NS	0.128	1.339
Socio-economic characteristics				
Education level (Ref: Primary)	1.656	NS	0.828	3.314
Household income	1.038	NS	0.389	2.766
Source of water at household (Ref: Protected)	0.315	NS	0.063	1.577
Other factors				
Use of contraception (Ref: No contraception)	1.414	NS	0.587	3.410
Significance levels *** <0.001; ** <0.01; * <0.05; NS-Not Significant				
Model χ^2		38.00		
Df		16		
P-value		0.002		
N		294		
R ²		0.146		

6.5 Discussions and conclusions

6.5.1 Discussion

The study found perceptions of participation in development to be positively associated with fertility choices under investigation, including contraception use and desired fertility. Adult respondents who viewed development to be participatory were also found to be using at least one method of contraception. These respondents were also more likely to have fewer children (4 children or less and not more than 4 children) compared to those without participatory development views.

An investigation of people's perceptions of development and how this relates to their fertility choices is an area of research that is yet to be widely undertaken. Although understanding people's perceptions has been applied in various other studies, including in other health research, research into people's perceptions of development is an area that is yet to be widely undertaken. Even more important, the approach has yet to be utilised in the area of perceptions of development and fertility choices. Yet, the approach has been found to be beneficial where it has been applied. The health and environmental studies where research into people's perceptions of their environment and various health issues has been undertaken have found that people's perceptions are important in the actions taken to in either addressing health issues or conserving their environments (Behrman, Kohler, & Watkins, 2003; Zulu & Chepngeno, 2003).

Findings of the analysis in this study reinforce the United Nations' definition of development adopted in the study. The United Nations Development Fund (UNDP) defines development as the progressive act of making a better life for everyone, by meeting their basic needs, ensuring everyone has enough food to lead healthy lives, having a safe and healthy place to live, ensuring that everyone has affordable services and ensuring that everyone is treated with dignity and respect (United Nations Development Program, 2010c). This study focuses on the idea of involving people in the determination of their development needs through the understanding of their perceptions and how these relate with their wellbeing. This approach and the UNDP's definition is reinforced by other scholars who view development as a phenomenon that needs to go beyond monetary/economic indicators. Amartya Sen for instance views development as the art of improving people's capabilities so that their functioning in the lives and society can also be improved (Sen, 1999). By modeling the

relationship between people's perceptions of development (focusing specifically on perceptions of participation in development) and their fertility choices is aimed at demonstrating that people's capabilities can be improved if their fertility choices improve and likewise. The findings of this study demonstrate the existence of a relationship between improvement in wellbeing and people's views of development. People's views of development, participation in development and future development prospects are related to their fertility choices, an indication that these two issues may influence each other.

One of the most important goals of development is to ensure that progress in the improvement of people's lives is sustainable, an approach that the international community strongly recognizes such that it forms the main agenda in the post-2015 Millennium development goals (United Nations, 2013a). To achieve this, it has been proposed by various scholars that development efforts need to involve beneficiary communities in development initiatives in order to improve sustainability of these development efforts (Chambers, 2005; Guijt & Shah, 1998; Sen, 1999). This chapter proceeds at highlighting the connection between enlargement of the capacity of the socially and economically marginalised to participate in decisions relating to the development projects implemented for them and the resultant improvement in their wellbeing. The rural populations can be given a platform to participate in development initiatives, thereby refocusing development priorities from the perspectives of the non-rural, most of who determine the development initiatives for the rural populace (Chambers, 1983). Focusing on this group is important as the rural poor in the region are in most cases disadvantaged, thereby experiencing worse wellbeing outcomes.

Results of this study emphasize the importance of prioritizing and implementing population policies by governments in the region in order to reverse the stall in fertility decline being experienced in a majority of countries in the sub-Saharan Africa (Ezeh, Mberu, & Emina, 2009; David E. Sahn & David C. Stifel, 2003). This is urgent since population/fertility policies have previously been relegated to the periphery, yet to advance development and feel the gains of these efforts, lower fertility in the country and the region will have to be achieved (United Nations Population Fund, 2013). One of the areas of focus should be on reducing parity progression. Even most important, is the incorporation of both women and men since this study found women to be significantly more likely to desire to have fewer children than men, yet in reality, they may not be the decision-makers in the eventual determination of their attained fertility. Although policies incorporating men in family

planning programmes in various settings in the region are being undertaken (Bayray, 2012; Kim, Marangwanda, & Kols, 1996; Rusatira & Kyamanywa, 2013), these need to be stepped if more progress in changes in fertility is to be experienced. Indeed efforts to address fertility would have better results if both men and women are involved since in the region, men are considered to be the main decision-makers on family size, access to care and contraception (Drennan, 1998). Implementation of these efforts is even more urgent since a majority of the respondents in this study still desire to have many children (48.4% and 31.7% of respondents were found to desire to have 4 and 5+ children respectively), indicating the need to also have policies and programmes ensuring adequate supply and access of contraception in place. Further, since contraceptive use and parity determinants span the socio-economic and other aspects of lives such as education and poverty, there is need to focus not only on economic, but on social advancement as well, if the uptake of contraception and reduction in the desire to have large families is to be achieved (Bongaarts, 2011; Notestein, 1945, 1953). Indeed poverty and low educational achievement in the region are some of the leading factors promoting the desire for many children, who are perceived to be important in cushioning families in times of need (Bongaarts, 2011). This demonstrates how inter-twined development and fertility are both in causes and outcomes, making the focus on both a priority.

6.5.2 Limitations of study

Similar to the analysis in chapter 5, the community of study is quite homogenous in many aspects, making it difficult to have any statistical differences in some of the findings. Culturally, ethnically and religiously the community is not diverse, since almost all respondents share the same religion, language and most had not lived outside the community. This would therefore imply that respondents in this study may share a similar outlook towards life and their preferred development priorities as was found in a study in a similar environment (semi-arid) where food security was ranked highest in a semi-arid area (Doss et al., 2008). Other studies have found culture to be important in perceptions of development, economic wellbeing and in development progress (Harrison & Huntington, 2000; Yenyurt & Townsend, 2003). A study by Dorn D et al (2007), although conducted in a developed context, found culture as measured by language has an impact on subjective well-being (Dorn et al., 2007).

6.5.3 Conclusion

Despite some of the limitations, this study adds to the voice advocating for increased community participation in development, by focusing on their perceptions of development. This is because as highlighted in the results, individuals perceiving development to be participatory are likely to make better fertility choices. This approach could therefore be adopted as one of the non-economic indicators and measures of development that could be utilised in measuring people's satisfaction with development initiatives as well as indirectly using this to assess and monitor the success of development initiatives in improving people's wellbeing outcomes.

7 MAIN FINDINGS AND CONCLUSIONS

7.1. Main findings

This chapter provides a summary of the thesis by highlighting the key findings and a discussion of the anticipated use of the study findings for sustainable development policies in Makueni County and as a guide for development approaches in other counties in Kenya as well as in other countries in sub-Saharan Africa. The policy and program implications of this study are also outlined, followed by priorities for future research in the area of public perceptions of development and relationship with wellbeing. The chapter also outlines the study's limitations and the planned publication of research findings.

Neo-classical approaches to development, most of which are still currently being applied in many development initiatives focus on development largely as an economic issue, where progress is assessed in economic terms, for instance, by using such measures as standard of living and income. These approaches have led to an increasing use of these income-focused assessments of development which although are important in assessing countries' progress in development, they are not adequate in highlighting non-economic aspects of development. Income-based measures are indeed considered important in assessing development progress at the macro level. However, other non-monetary indicators are increasingly being recognised as equally important, as they help in understanding the dynamics of socio-economic development (Ledwith, 1997; Ray, 1998; Sen, 1999, 2010; Todaro & Smith, 2006). There is an increasing appreciation of development as a phenomenon that goes beyond just the monetary measures, to also include the empowerment of development-beneficiaries to determine their development needs and take part in development initiatives implemented to benefit them. This has led to the incorporation of both monetary and non-monetary measures of assessing development by various institutions involved in development matters. These include the World Bank's inclusive growth where focus is paid on reducing development disparities within and between countries (Ray, 1998). The United Nations also incorporates other measures of development in its assessment of human development, which it views as entailing much more than incomes or economic growth to also include expanding people's choices (United Nations Development Program, 2010c).

Despite this recognition and the increasing incorporation of these additional assessments in development, the situation of wellbeing for a majority of people living in developing countries and especially the rural areas of these countries has improved only marginally, even reversing in some cases (United Nations, 2011a; World Bank, 2010b). Even more worrying is the persistence of poor development progress and poor wellbeing outcomes despite the implementation of many development initiatives in these countries. One of the worst affected regions is sub-Saharan Africa, whereby a majority of its rural population continues to grapple with challenges around health, education and wellbeing despite a global improvement in these wellbeing issues.

This study therefore aimed to seek an alternative approach to development that may ensure faster and more sustainable development. It was deemed worth undertaking as there have been numerous initiatives to address development, poverty and wellbeing which have unfortunately failed to achieve the intended improvement in people's lives. Some of the reasons given for this poor progress has been the poor prioritization of people's development needs, as there has been minimal involvement of people in determining their development needs, an omission that has contributed to poor identification/prioritization of people's needs. In seeking to demonstrate that involving people in determining their needs has potential in ensuring the improvement of their wellbeing as well as sustainability of the initiatives implemented, this study explored the public perceptions of development and relationship with wellbeing, using two rural communities of Makueni County in Eastern Kenya as a case study. This is the first study that has investigated how members of a rural community in a developing country perceive development, factors influencing these perceptions and how these perceptions relate with their wellbeing outcomes. Very few studies and development initiatives have sought to incorporate participatory development in their initiatives, despite this approach having potential to ensure sustainable development. This thesis therefore seeks to reverse this view, by arguing towards a shift in development approaches from those solely viewing development as an economic approach to a more participatory one that incorporates both the economic approaches as well as the opinions and actions of those that the development efforts are intended for.

The investigation was undertaken using qualitative and quantitative data collected from youth, women, men and leaders from the two sub-locations. The initial investigation was aimed at understanding how those responding in the study conceptualise development, how

they rank their development needs in order of priority and how they articulate possible strategies to address these development needs. The study found that definitions of development and strategies to address a community's felt needs are multidimensional and go beyond the monetary measures and context. When ranking of development needs was done, it emerged that respondents were able to articulate their needs. Access to adequate water, followed by availability of electricity, improvement of transport and health care facilities were considered important development needs. On the other hand, access to credit, absence of disease and improved security were ranked as least important in development priority needs. Responses from the government development officials concurred with the community members' views, where development was summarised as entailing the measure of a society's wellbeing including social, political and economic aspects. The analysis also found poverty to be a major indicator of lack of development as it denotes the level of development achieved and could therefore be used to assess development progress. These findings add to the limited number of studies investigating approaches that could be used to drive sustainable development. This idea feeds into the theoretical framework used in the study whose main argument is to approach development from a holistic perspective, an undertaking that could be achieved by involving those who are likely to benefit from the implemented initiatives. Seeking to understand people's views of development, their development needs and possible approaches to meet these needs is likely to contribute to an all-inclusive sustainable development since it is viewed as the first step towards participatory development (Soubbotina & Sheram, 2000).

In defining development, poverty emerged to be a strong indicator of lack of development highlighted by social, economic, health and socio-economic aspects of want. Some of its social indicators include not having a spouse or children once one attained the age of marriage as well as the inability to care for one's family. Lack of respect from fellow community members including uninvolvement in important community decisions and psychological worries resulting from a myriad of problems were also reported as signs of social poverty. Emerging economic indicators of poverty include poor housing, poor livelihoods as well as the inability to access and/or afford most essential goods and services needed for survival. Lack of knowledge and access to essential health services, leading to poor health outcomes and poor psychological health are the main indicators of health poverty. Socio-economic indicators of poverty highlighted include inability to access good-quality and regular schooling and unavailable leisure time and activities. These indicators of

poverty highlight areas where development efforts may be focused, in order to improve the wellbeing of Makueni residents. This finding reinforces the existence of variations in perceptions of development, where the interpretations and indicators are influenced by context (Brock, 1999; Chambers, 2001; Devereux, 2003; M. Green, 2007; Narayan, Chambers, Shah, & Petesch, 2000; SHDRP & UNDP, 1998; Tierney, 1997).

This study also found that those responding defined development as a progressive act denoting improvement in all spheres of life. It emerged that these improvements/progress were hierarchical with improvement in personal/household sphere leading to improvement in community affairs and then to national improvement was reported to be the pathway to development. It further emerged from those responding that unless individual/household development is achieved, it would be difficult to achieve community and eventually national development, implying a trickle-up effect of development from the individual, to community and to the national level. This finding contributes to the empowerment of development beneficiaries to determine their needs and to provide ideas on how best to be involved in development initiatives. Viewing development as a hierarchical issue shows that consideration is given first in meeting personal/household needs/development before collectively contributing to community and then to national development. This demonstrates how clearly those benefiting from development initiatives are able to rank their development needs, an undertaking that shows a population that both empowered and willing to partake of development initiatives in their environ. The approach could also act as a way of community-empowerment, thereby improving capabilities and functionings as demonstrated by Amartya Sen's Capability Approach (Sen, 1999).

Guided by the gender and development theories and the theoretical framework applied in this study and others emphasizing the planning and implementation of development from a gender perspective, this study also investigated the gender differentials in the perception of development. Gender theories of development emphasize the importance of involving both men and women in development plans and initiatives at personal/household, community and national levels. To adequately involve both men and women in development however, understanding their views of factors they consider to be important in development was deemed paramount. This study found statistical differences in the way men and women perceive the factors that are important in development at the personal/household, community and national levels. Gender was also a main influencer on whether people were

optimistic about their community's development, whether they viewed development as collaboration or whether they were likely to be willing to participate in development initiatives implemented in their communities. These findings indicate that involvement of both men and women in development is important for sustainability of the initiatives implemented while also helping empower the community and ultimately improve their wellbeing and capabilities (Sen, 1999).

A further investigation of the relationship between perceptions of development and wellbeing outcomes found perceptions of participation in development to be positively associated with the wellbeing outcomes under investigation, that is, fertility choices (contraception use and desired fertility). Adult respondents who viewed development to be participatory were found to be using at least one method of contraception. These respondents were also more likely to desire to have fewer children compared to those not viewing development as a participatory approach. These findings indicate that involvement of people in determining their needs makes them more likely to make better choices regarding their fertility, a finding that supports the proposed approaches to development which incorporate participation as a key component and which has potential to improve people's wellbeing. Those involved in development initiatives are likely to be more proactive about their lives, making informed decisions about such matters as using contraception and birth control.

7.2. Conclusion

Although many studies acknowledge that the involvement of local communities in development initiatives designed to benefit them is an important step in sustainable and equitable development, very rarely do those implementing these development initiatives employ this approach. This study sought to demonstrate the importance of approaching development from a participatory approach where beneficiaries of development efforts are involved in decision-making and actions regarding development efforts intended to benefit them. This study highlights the importance of this approach in ensuring that development initiatives utilise local resources and expertise, as well as prioritizing development efforts based on the beneficiaries' felt needs. The study also demonstrates that involving the communities in development has a positive effect on their wellbeing outcomes, and that when participatory approaches are used in development efforts and approaches, all members

of the community, regardless of age, gender, household wealth status and wellbeing need to be involved in these initiatives. This is because all these factors influence their opinions of development in their community as well as their health outcomes.

The study uses two types of concepts; subjective (perceptions of development) and objective (wellbeing outcomes) and demonstrates how the two are linked. This approach was informed by the gap in previous studies and approaches, which have investigated the perceptions of development and studied people's wellbeing in isolation without linking the two. The argument for this approach was that people's perceptions of development has a relationship with their socio-economic, demographic and wellbeing outcomes. The study broadens our understanding of people's perceptions of development, including the most important factors demonstrating development progress as well as a ranking of these needs in order of priority, which is influenced by their most felt needs. Findings of the study therefore demonstrate that perceptions, although a subjective measure, has a bearing on other measurable/objective measures, in the case of this study, socio-economic and demographic factors and objective health outcomes. The results show that if people are involved in development initiatives designed for them, they are more likely to register better wellbeing decisions, choices and ultimately, health outcomes. Being a study at a micro-level, this approach may therefore be useful in prioritising development needs and plans at such a micro-level e.g. at Makueni County level while at the same time using these approaches as a yard-stick in the assessment of the success of the implemented development initiatives. The approach therefore has potential to help assess the progress of development and the achievement of the MDGs, due to the analysis of the relationship between how development is perceived and wellbeing outcomes. Results of this study, implemented in two communities of Makueni County can thus be applied to, and replicated in the greater Eastern region, and in the rest of Kenya and sub-Saharan Africa. This study's findings carry strong policy and programmatic implications especially as Kenya seeks to achieve the Vision 2030 goals, which are hinged on progress in development driving the country to the middle-income status by the year 2030, and which if achieved, the country would also progress in meeting the MDGs, and consequently the general wellbeing of the residents.

Efforts to advance development and the improvement of wellbeing in developing countries, in sub-Saharan Africa and in Kenyan in particular, continue to be undertaken. Traditionally, most of these efforts have focused on neoclassical definitions and quantitative approaches

and assessment of development, where emphasis is placed on the improvement of incomes and standard of living. At the national level, traditional indicators of development have focused on the ability for nations to expand their output at a rate faster than the growth rates of their populations (per capita income) as with the alternation of modes of production and employment, for instance from agriculture to rapid industrialisation. More recently however, there is the increasing appreciation of both these economic and other non-economic factors that can be used as indicators of development, including dynamic aspects of socio-economic development. These include the removal of unfreedoms that leave people with little choice and little opportunity of exercising their reasoned agency, thereby improving their capabilities to live fulfilling lives, including participation in matters affecting their lives, such as development. Despite the acknowledgment of the multidimensional nature of development, few development studies in the country and in sub-Saharan Africa apply this approach. Most especially the involvement of development recipients in decisions relating to their needs has not been widely undertaken. And yet, the massive development efforts have failed to yield satisfactory development progress. The levels of poor wellbeing are also clearly reported, which include poor educational attainment, poor health outcomes, high poverty levels, as well as slow infrastructural development. These observations point to the need for alternative approaches to development.

The recognition of both monetary and non-monetary as well as quantitative and non-quantitative measures of development sought to reinforce the multidimensionality of this phenomenon. To better understand development in Makueni County, a setting similar to others in the region, the study sought to enquire how members of the study communities perceive development. The study also went further to link these perceptions (which are subjective or non-economic measures) with the people's wellbeing outcomes (which are objective or quantitative indicators of wellbeing). This approach was used in order to show that there exist a link between involvement of communities in their development efforts and outcomes of development, in this case their wellbeing outcomes.

The study recognises the importance of incorporating other non-monetary and non-quantitative measures especially as perceived by those responding to this study, highlighting the need to refocus attention on not just the monetary measures and indicators of development, but also on employing non-monetary and non-quantitative measures and approaches to development plans. This is supported by this study's finding which recognises

that perceptions of development are not specific, rather they vary by context and strategies to address these need to be contextually tailored as these perceptions and priorities are likely to be influenced by such factors as resources and climatic conditions. This is best demonstrated by the ranking of water as the greatest priority in Makueni, a situation that is likely to be different in other settings of the country, especially the non-arid areas or other settings of the region. Perceptions of poverty by respondents in this study for instance go beyond monetary or economic measures and indicators. The word development is derived from the verb 'develop' which means "to unfold, expand, strengthen, spread, grow, evolve, become more mature, elaborate, exploit the potentialities, make or become larger (Waite, 1979). The main characteristic of development highlighted in this definition is the aspect of change for the better, in this case progress. This idea of progress transcends levels and refers to change at individual/households, communities and nations. This study not only looks at the concept of progress as perceived by those responding in the study, but also on the impact of the progress as defined, hypothesized and perceived in this study, on the lives of people and communities. These areas included poverty, capabilities and health outcomes.

7.3. Limitations of the research

Various factors were put into consideration at the time of data collection in order to ensure that the data collected was of high quality. Before data collection commenced, the questionnaires were pre-tested in order to ensure that the pre-selected responses were valid and captured all the possible responses. This was especially important because the tools of data collected and the questions implemented in this study had yet to be applied in other studies, hence the need to check their content and consistency. In addition, since the data was collected in the local Kamba language (the language spoken by the residents of Makueni County) all the tools of data collection had to be translated. At the time of data collection, care was taken in order to ensure that the data collected met high standards. For instance, random spot-checks were done by the supervisor in order to verify the responses. In addition, before the data were submitted for data entry, it was edited three times, first by the field research assistants, then by the field supervisor and finally by the researcher. Any questions that were unclear or which had inconsistent responses were sent back to the field for clarification before the data was entered.

Despite all these precautions, there are some limitations to this study that the reader should be made aware of. This study employed the mixed-methods approach where data was collected at the household level using questionnaires and at the community level using focus group discussions and key informant interviews with community members and leaders respectively and development partners. The sample of households and individuals to be interviewed was drawn from a list of the study area's population, listed during the Energy project's baseline assessment conducted in between March and May 2011. Visits were made to these households during the day in order to secure the interviews and where the selected respondents were missed after four visits, replacements were made. It is therefore possible that those found at the households were those not engaged in employment outside the home, including the migrants to towns and cities. For this reason, this group of the community's residents could have been systematically excluded from the sample.

The other limitation of the study is that the sample size was small and therefore the results need to be interpreted and generalised using caution. This limited some analysis for instance, as gender has a highly significant relationship with perception of development, it would be important to assess the impact of the factors in the model on perception of development separately for males and females. The size of the data in this study was however not sufficient for the structural equation model to run when the data were split by gender. Gender indeed has been found to have significant relationship with economic wellbeing in other studies, and the data for males and females were analysed separately (Leach et al., 1999).

The homogeneity of the study community could also impact the results of this study. The community of study is quite homogenous in many aspects, making it difficult to have any statistical differences in some of the findings. Culturally, ethnically and religiously the community is not diverse, since almost all respondents share the same religion, language and most had not lived outside the community. Further, in relation to livelihoods, most of the households visited used the same source of water (open source of water such as open wells) indicating that these households may not have great variations in their socio-economic statuses. The community also engages in similar livelihood activities, which are predominantly farming, used for subsistence, which could also influence their development priorities. This would therefore imply that respondents in this study may share similar outlook towards life and their preferred development priorities, as was found in a study in a similar environment (semi-arid) where access to water was ranked highest (Brock, 1999).

Other studies have found culture to be important in perceptions of development, economic wellbeing and in development progress (Harrison & Huntington, 2000; Yenyurt & Townsend, 2003). A study by Dorn D et al (2007), although conducted in a developed context, found culture as measured by language has an impact on subjective well-being (Dorn et al., 2007).

7.4. Policy and programme implications

This study is expected to inform policy by:

1. Emphasizing that definitions of development are multidimensional and vary according to context. The study therefore recommends that strategies to address development should encompass both monetary and non-monetary measures and be contextually-tailored.
2. Emphasising that development should be approached using both quantitative and qualitative approaches. Participatory approach is particularly an important approach where beneficiaries of development efforts are involved in decision-making and in actions regarding development efforts intended to benefit them. This is informed by the results of this study which indicate that even within the same community, people's perceptions will vary depending on their age, gender, perceived household wellbeing and health behavioural factors. The study therefore advises that development practitioners rethink development approaches and refocus on employing more participatory approaches in the understanding development at a micro level. One of the ways that communities can be involved in development is the utilization of indigenous knowledge.
3. Highlighting the importance of participatory approach in development particularly where communities are asked to rank their development priorities, thereby designing development programmes based on the communities' most felt needs. This would help maximise impact of development while maximising the available resources.
4. Emphasising that decentralising development is the best approach if Kenya is to achieve equitable and sustainable development and achieve the Kenya Vision 2030 goals. This is because local expertise is employed in designing development strategies

based on local culture, environment and resources in the various regions and districts. This approach is also best suited for other countries in the region who face similar conditions in regards to challenges to development.

5. Highlighting that participatory development holds the key not only in sustainable and equitable development, but also in the improvement of the participating communities' wellbeing. This is demonstrated from results of this study where perceptions of participation in development are related to wellbeing outcomes, including use of contraception, access of services and women's health. Respondents with positive perceptions of development reported better outcomes. This emphasizes the importance of involving rural communities in decisions and actions relating to development in their communities.

This study's findings also carry a number of programme implications, one of the most important relating to gender mainstreaming in development matters.

7.4.1 Gender mainstreaming in development projects

The study finds gender to be an important determinant of how development is perceived as men and women were found to view development differently. In addition, health outcomes arising from these perceptions were also established in regards to contraception, fertility as well as on child health. Gender is therefore important in the health outcomes at the household level, indicating the need to ensure that it is given consideration in planning and execution of development studies, an approach that could also be applied to other counties and regions of the country. This has potential in ensuring that there is a gender equality in health and wellbeing outcomes. This recommendation is particularly informed by the acknowledgement that women and children bear the disproportionate burden of poverty and poor development progress as women make up the largest majority of the world's poor (UNDP, 2013). The impact of these conditions on their health and wellbeing is also unprecedented, including on such issues as poverty, child undernutrition, maternal morbidity and mortality, poor access to health care when needed, poor sanitation, illiteracy, early marriages, and lower wages among other factors (Tinker, 1990; UNDP, 2013). The relationship between poor development progress and gender inequality has been well

established whereby the two are an outcome of each other. Countries with unequal distribution of human development have been found to also have huge inequalities between men and women, and likewise, huge gender inequalities have been found to also be accompanied with huge unequal distribution of development (UNDP, 2013). Despite the importance of reducing the gender gap, gender mainstreaming in development initiatives in the developing world is still not widely done. Kenya has attempted to achieve this.

The Kenyan government has policies and programmes that ensure that gender and development are core aspects of development. There is a ministry delegated to this role. The Ministry of Gender and Social Development which provides life skills to women and persons with disabilities is dedicated towards improving wellbeing through the gender perspective. The Ministry facilitates those in their development programmes in improving their living standards, through giving of seed money to start up income generating activities. These funds are allocated from the Women Enterprise Fund. This support is diverse and may include provision of cash and tools including wheelchairs, tailoring machines and irrigation machines. In addition, the recently adopted constitution of Kenya, implemented from March 2013 has tried to ensure that women are represented in positions of power. The Constitution allows for a provision of 290 seats directly elected by geographic constituencies and 47 seats for women county representatives (Akech, 2010). It is therefore evident that following these provisions, the Kenyan government has sought to promote gender empowerment and specifically offer women and girls an opportunity autonomy in development and health matters as well as in education and leadership opportunities. There are however still major differences in public service opportunities for men and women in the country. For instance, despite the provision in the constitution reserving 47 seats for women, the March 2013 elections had a disappointing level of participation by women. Of the 232 candidates for the 47 governor seats, only 6 (2.58%) were women, while only 20 (8.3%) out of the total number of 240 candidates of the 47 senate seats were women (Lisek, 2013). In addition, the country still experiences adverse health outcomes mainly affecting women and children (KNBS & ICF Macro, 2010). Efforts to include both men and women's voices in development through gender inclusivity in development planning and implementation therefore need to be stepped up in order to uplift their wellbeing outcomes. Involvement of men in fertility programs is also vital if contraception and fertility decline, both of which have a bearing on development, are to be improved.

7.4.2 Social protection programmes

The importance of initiating social protection policies and programmes particularly for the very poor in developing countries has been reported to be an area that development efforts need to focus on (Barrientos & Hulme, 2008; Conway, de Haan, & Norton, 2000). This argument arises from the established role of social protection strategies as providers of effective response to poverty and vulnerability, through the public actions taken in response to vulnerability, risk and deprivation (Conway et al., 2000). Based on the outcome of the analysis in this study, the community of study can be termed as one which faces high poverty and vulnerability levels, necessitating measures to cushion those in desperate situations against falling into deeper crises. Interviews with government officials revealed that efforts were on-going to cushion the very poor through various social protection policies. One of these efforts relate to the provision of tuition fees for those unable to cater for this. It was reported that the Constituency Development Funds (CDF) in constituencies across Makueni County had set up a kitty to support gifted secondary school students from the County whose families were unable to afford fees for secondary school education. There were also various programmes targeting persons with disabilities living in the county. These included trainings on vocational rehabilitation where these members are then referred to relevant government departments where they receive life skills in various trainings, then are allocated funds through the ministry of Gender and Social Development's National Fund of the Disabled. Further, at the time of study, the government was implementing a pilot project where cash transfers are given to people with severe disabilities while the elderly in the community were receiving cash transfers. Despite these efforts being put in place, this analysis revealed that a majority of the community's residents are vulnerable, indicating that efforts need to be stepped up in order to improve the living standards of the most vulnerable members.

7.5. Planned publication of research findings

Publicity of results of this research will be done through presentation to policy makers, development experts and other experts in development work as well as to the community. It is expected that views elicited from these dissemination exercises will be used to improve on future development research.

This study is also expected to build the academic research knowledge by publishing papers derived from the thesis in peer-referred journals. A paper from chapter four is published in

the Journal of African Studies in Development (Essendi et al., 2014). A second paper from chapter five is being revised for resubmission while a third, from chapter six is undergoing a second review in PLOS One journal. This research can thus be accessed by those involved in, and interested in development research.

7.6. Areas for further research

A few areas for further research are suggested in this study. There needs to be continued research incorporating additional measures of wellbeing and the relationship with perceptions of development. This will enable monitoring of the progress of development or participation in development and improvement in human development in the various counties of Kenya.

There is also need to expand this approach to other areas of the country. This study was conducted in an ethnically, culturally and economically homogenous rural poor community where significant effects were not found between perception of development and some socio-demographic and perceived variables. Further studies need to be conducted that can study perceived development separately for males and females and also in a community that shows some economic, cultural and social variations. This would help tease out the differences in perceptions of development, which could not be adequately established in this study.

More studies investigating perceptions of development and participatory development need to be carried out in order to improve the benefits of development where the beneficiaries are involved in the development process, spanning development planning and execution. This has potential to help achieve sustainable development while minimising the cost and at the time maximising the local expertise and resources.

Appendices

Appendix 1: Kenya ethical approval for the Replication of Rural Decentralised off-grid Electricity Generation through Technology and Business Innovation Project



KENYA MEDICAL RESEARCH INSTITUTE

P.O. Box 54840 - 00200 NAIROBI, Kenya
Tel: (254) (020) 2722541, 2713349, 0722-205801, 0733-400003; Fax: (254) (020) 2720030
E-mail: director@kemri.org info@kemri.org Website: www.kemri.org

KEMRI/RES/7/3/1

August 17, 2010

**TO: DR. ELIYA M. ZULU,
AFRICAN INSTITUTE FOR DEVELOPMENT POLICY,
PRINCIPAL INVESTIGATOR**

**RE: NON-SSC PROTOCOL NO. 226 (RE-SUBMISSION): SOCIO-
ECONOMIC IMPACT ASSESSMENT OF RURAL DECENTRALIZED OFF-
GRID ELECTRICITY GENERATION SCHEMES IN RURAL KENYA.**

Make reference to your letter dated August 5, 2010 received on August 10, 2010. Thank you for your response to the issues raised by the Committee. This is to inform you that the issues raised during the 180th meeting of the KEMRI/ERC meeting held on 20th July 2010, have been adequately addressed.

Due consideration has been given to ethical issues and the study is hereby granted approval for implementation effective this **17th day of August 2010**, for a period of twelve (12) months.

Please note that authorization to conduct this study will automatically expire on **16th August 2011**. If you plan to continue with data collection or analysis beyond this date, please submit an application for continuing approval to the ERC Secretariat by **3rd July 2011**.

You are required to submit any amendments to this protocol and other information pertinent to human participation in this study to the ERC prior to initiation. You may embark on the study.

Yours sincerely,

**R. C. KITHINJI,
FOR: SECRETARY,
KEMRI/NATIONAL ETHICS REVIEW COMMITTEE**

Appendix 2: University of Southampton ethical approval_ the Replication of Rural Decentralised off-grid Electricity Generation through Technology and Business Innovation Project

UNIVERSITY OF
Southampton
School of Social Sciences

Zoe Matthews
STATS
School of Social Sciences

14th June 2010

Dear Zoe,

Approval from School Research Ethics Committee

I am pleased to confirm that the Research Ethics Committee of the School of Social Sciences has given your research project ethical approval -

Application Number: SOC200910-35

Research Project Title: Socio-economic Impact Assessment of Rural Decentralised off-grid Electricity Generation Schemes

Date of ethical approval: 14th June 2010

In order for the University to ensure that insurance is in place for this research, please complete the Insurance and Research Governance Application form attached and return to the address below as soon as possible, along with a copy of this letter and all supporting documents relating to your project:-

Research Governance Office
University of Southampton
Building 37
E-mail: rgoirfo@soton.ac.uk

It is your responsibility to complete and return this form, and work on the project should not begin until insurance is in place. The form may also be found on our intranet in the Staff and PGR Zones:-

<http://www.soton.ac.uk/socscinst/>

Yours sincerely,



Professor S J Heath
Chair, School Research Ethics Committee
School of Social Sciences
Direct tel: +44 (0)73 80592578
E-mail: S.J.Heath@soton.ac.uk

Cc: file

School of Social Sciences, University of Southampton, Highfield Campus, Southampton SO9 4BJ United Kingdom
Tel: +44 (0)73 8059 0300 Fax: +44 (0)73 8059 2674 www.southampton.ac.uk/sssci

Appendix 3: Ethical approval _University of Southampton

From: Boak S.L.
Sent: 15 December 2011 09:54
To: Essendi H.
Cc: Johnson Martina; Madise N.J.; Matthews Z.
Subject: Ethical submission - Essendi (SSEGM-11)

Dear Hildah

I am pleased to let you know that your recent ethics committee application on 'Public perceptions of development, participation and relationship with wellbeing: the case of Makueni district in Kenya' has now been given ethical approval by the Faculty Ethics Committee (ref: SSEGM-11)

Please note that this email will constitute evidence of ethical approval.

We wish you every success with your research.

All best wishes
Sarah

Sarah Boak
Senior Research Support Officer
Research and Innovation Services
Faculty of Social and Human Sciences
Building 44, Room 2055
s.l.boak@soton.ac.uk
x28101
T: 02380 598101

Appendix 4: Research authorization

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241349
254-020-310571, 2213123, 2219420
Fax: 254-020-318245, 318249
when replying please quote
secretary@ncst.go.ke

P. O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: NCST/RCD/14/012/1391

Date: 5th October 2012

Hildah Minayo Essendi
University of Southampton
UK.

RE: RESEARCH AUTHORIZATION

Following your application for authority dated 26th September, 2012 to carry out research on "*Public perceptions of development, participation in development and relationship with wellbeing: the case of Makueni District in Kenya,*" I am pleased to inform you that you have been authorized to undertake research in **Makueni District** for a period ending 31st December, 2012.

You are advised to report to **the District Commissioner and the District Education Officer, Makueni District** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.



DR M.K. RUGUTT, PhD, HSC.
DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioner
The District Education Officer
Makueni District.

"The National Council for Science and Technology is Committed to the Promotion of Science and Technology for National Development".

Appendix 5: Research permit

CONDITIONS

1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed with-out prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice


REPUBLIC OF KENYA
RESEARCH CLEARANCE PERMIT

GPK60553mt10/2011 (CONDITIONS—see back page)

PAGE 2 **PAGE 3**

THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Hildah Minayo Essendi
of (Address) University of Southampton
UK,
has been permitted to conduct research in

Makueni	Location
Eastern	District
	Province

on the topic: **Public perception of development, participation in development and relationship with wellbeing: the case of Makueni District in Kenya.**

for a period ending: **31st December, 2012.**

Research Permit No. NCST/RCD/14/012/1391
Date of issue 5th October, 2012
Fee received KSH. 2,000



Hildah Minayo Essendi
Applicant's Signature

M. Ngunjiri
Secretary
National Council for Science & Technology

Appendix 6: Community leader key informant interview guide

Public perceptions of development, participation in development, and
relationship with wellbeing
KII Guide Community Leader

Consent form

Explanation of Research Project:

PURPOSE OF STUDY:

Hello, my name is _____. The purpose of this discussion is to gain an understanding into the way people in this community understand poverty and development in their context. We want to know your views and opinions about poverty, the concept of development in your context, what constitutes development, your views about the development strategies being undertaken and community contribution to this development. You were selected for this discussion as **a community leader in** this community.

PROCEDURES:

We will also be talking to other opinion leaders in Makueni and also those involved in development at the national level. This discussion will take about 30 minutes of your time and we may contact you again later in the study to participate in another discussion in follow-up studies. During the discussion, feel free to interrupt me at any time with something you think is important. I do not want to trust my memory so I will ask your permission to take down notes, and tape-record. Your views are important and there is no right or wrong answer. If you feel uncomfortable having any portion of the interview recorded, please inform me to switch off the tape.

RISKS/DISCOMFORTS:

We do not expect the discussion to cause you any harm but if you feel uncomfortable with some of the questions, you can choose not to answer them.

BENEFITS:

The results of the study will be used for educational purposes and will be used to understand community members' views regarding development.

CONFIDENTIALITY:

Your responses will be private and confidential. Your name will not be attached to the answers. The tapes will be translated into English will be kept under lock for ten years at AFIDEP offices, after which they will be destroyed. The tapes will not be made available to the community or to other parties not involved in the project. When reports and papers/publications are done, anonymous quotes, without the respondents names will be used.

VOLUNTARINESS:

Your participation in this research project is voluntary. You have the right to withdraw from the research study at any time without any problem. Your participation in this study will not affect your access to services in and around this community.

WHOM TO CONTACT:

If you want to talk to anyone about this research study, or if you think you have been treated unfairly; contact Hildah Essendi on 0720334239 or The National Council for Science and Technology (NCST) on 020-310571/020-2213123.

If you agree to participate in this study, please sign your name below.

Subject's signature or fingerprint

Witness to Consent Procedure

Signature of Investigator

Date

Note: *Signed copies of this form must be retained on file by the PI and a copy of the consent form given to the participant*

Questions

(Answer any questions that respondent may have and begin the discussion)

Meaning of Development

I would like us to begin by discussing the meaning of development from your perspective

1. What is development?

Probe: Whether it's a personal, national or international issue

Probe: poverty alleviation

Probe: Improvement in health and demographic outcomes

2. What does development mean to you as a Kenyan?

Probe the things that constitute development: education, roads, electricity, water, more income, market for agricultural commodities, health care, poverty alleviation.

Probe: Ask respondent to rank what they have mentioned in order of importance and give reasons for this ranking.

3. What does development mean to you as a leader/stakeholder in development?

4. Do you view development as a sponsorship or partnership?

Probe: Sponsorship by the government

Sponsorship by donors

Partnership between community members and the government

Partnership between the government and the international community/donors

Partnership between the government/the community and the international community/donors

Development policies in the country/community

Now I would like us to discuss the various development policies initiated in the country/in this community

5. Please give me a brief overview of the development policies in Kenya since independence.

Probe: policies on education, health, infrastructure (roads, electricity), water, agriculture etc.

Probe: National, regional, local policies

Probe: the achievements of these policies

Probe: their shortcomings

6. How can these development efforts be reinforced?

Probe: By whom?

Development efforts in the community/country

Now I would like us to discuss the various development efforts in the country/in the community

7. What development initiatives is your organization involved in, in Makueni district?

8. Who should be responsible for development in the country? Why?

9. Whose responsibility is it regarding development currently being undertaken by international aid organizations?
10. For how long should international aid be given to aid rural development?
Probe: reason/s for their responses
11. What should international funding be supporting?
Probe: Health, education, agricultural development, water, climate change etc.
Probe: Reasons for these responses
12. Should such funding be supporting programs like climate change and why?

Is there anything that you would like to add to our discussion?

Thank you for taking the time to talk with me today. What you have shared has been extremely helpful. I've been asking so many questions – do you have any questions for me?

[Answer any questions that the respondent has]

END

Appendix 7: Focus group discussion guide

Public perceptions of development, participation in development and
relationship with wellbeing

FGD Guide (Men, Women and Youth)

English/Kamba version

Consent form

Explanation of Research Project:

PURPOSE OF STUDY:

PURPOSE OF STUDY:

Hello, my name is _____. We are conducting a study in this community to learn how people understand development. We would like to know your views and opinions about development, for instance the things that you consider to be important in the development of this community, development efforts being undertaken in this community and community members' contribution to these efforts. We would also like to gain an understanding into the health of people in this community in relation to their views on development. You were selected for this discussion as a group (youth, women, men) with similar experiences and social background in this community. This study is being conducted as part of the requirement for the MPhil/PhD degree in Social Statistics by Ms. Hildah Essendi, studying at the University of Southampton in the United Kingdom.

Uvoo, kwa isyitwa nitawa _____. Tuendeesye ukunikili tumanye undu andu ma utuini uu maelewa ni maendeeo. Twiukulya kwa ndaia utumanyithye mawawoni maku iulu wa maendeeo, kwa muelekana, maundu ala utalaa ta ma vata muno kwa maenedeeo ma kisio kii, maendeeo ala methiitye utuini uu, na mitalatala ila yikiitye ni andu ma kisio kii kulingana na maendeeo. Twooka kwaku nundu musyi waku ni umwe wa misyi ingi 300 kisioni kya Kitonyini ila syasakuiwe nthini wa ukunikili uu. Ukunikili uu niwavata muno kwa Ms. Hildah Essendi ula ukusomea degree ya Professor (PhD), sukulu nene Southampton Ungelesa. (UK)

PROCEDURES:

We will also be talking to other similar groups in this community. About 8 -12 people will be involved in the discussion and it will take about one and a half hours of your time. We may contact you again later in the study to participate in another focus group or in other follow-up studies. During the discussion, feel free to interrupt me at any time with something you think is important. I do not want to trust my memory so I will ask your permission to take down notes, and tape-record. One person would speak at a time. Everyone's view is important in this discussion. There is no right or wrong answer. If you feel uncomfortable having any portion of the interview recorded, please inform me to switch off the tape.

NZIA ILA TU TUUMIA

Nitukwithia tuineena na ikundi ingi ova kisioni kii. Andu ta nyanya nimekwithiwa maikulwa mokulyo vandu vya isaa yimwe na nusu. Nitutonya kwenda kuneena na nenyu ingi itina wa keneena nenyu umunthi. Iwai mwi eanie ivinda yila tukwithiwa tuikulania mokulyo, kulya ikulyo ona yiva. Nitumukulya mwanya wa kuandika na kurecord undu tuendee na kuneena. Tunengane mwanya wa kuneena umwe kwa umwe. Mawoni ma kila mundu ni ma vata. Vayi usungio museo kana muthuku. Ethiwa nukwiwa utemwianie ivindani ya uneeni witu, vatonyeka no udavye ngavosya imasini ya kwosa wasya.

RISKS/DISCOMFORTS:

We do not expect the discussion to cause you any harm but if you feel uncomfortable with some of the questions, you can choose not to answer them.

MIISYO YA KUUSIKA

Tuikwikwatya ta vena muisyo ona umwe nthini wa uneeni witu, indi weewa utemwanie ni makulyo amwe wi muthasye kulea kumasungia

BENEFITS:

The results of the study will be used for educational purposes and will be used to understand community members views regarding development.

Masungio ala mekuma na ukunikili uu makatumika kwa kisomo kwa kuelewa maeendo ni kyau kisioni kii.....??????

CONFIDENTIALITY:

Your responses will be private and confidential. Your name will not be attached to the answers. The tapes will be translated into English will be kept under lock for ten years at AFIDEP offices, after which they will be destroyed. The tapes will not be made available to the community or to other parties not involved in the project. When reports and papers/publications are done, anonymous quotes, without the respondents names will be used.

KIMBITHI

Mosungio menyu makeethwa mema kimbithi. Masitwa menyu maikskwatany'a vamwe na masungio menyu. Tevu ila syina uneeni witu ikaluulwa siandikwe na kisungu na ikavingwa nesa, vandu vya miaka ikumi nthini wa ovisi wa (AFIDEP) na itinani ikaanangwa. Tevu iikaonanywa kana kumilwa kwa andu ma ndua kana andu angi mata konanitwe na ukunikili uu. Malivoti na mathangu ala maandikwa kumana na uneeni uu maikethiwa na masyitwa menyu.

VOLUNTARINESS:

Your participation in this research project is voluntary. You have the right to withdraw from the research study at any time without any problem. Your participation in this study will not affect your access to services in and around this community.

Kwithiwa wi nthini wa ukunikili uu nikwa ngenda yaku. Wii muthasye kutia/kueka/ kuma ukunikilini uu vate na thina. Kwiyumia kwaku ukunikilini uu kuiananga kana kuthuthya wia waku kana kukwata motethyo kwaku kisioni kii.

WHOM TO CONTACT:

If you want to talk to anyone about this research study, or if you think you have been treated unfairly; contact Ms. Hildah Essendi on telephone number 0720334239 or The National Council for Science and Technology (NCST) on 020-310571/020-2213123.

ULA UTONYA KUKUULYA

Ethiwa nuenda ukululya yiulu wa uneeni witu, ethiwa niwithiwa utanakuwa nesa, noukunie Ms. Hildah Essendi on telephone number 0720334239/ The National Council for Science and Technology (NCST) on 020-310571/020-2213123.

If you agree to participate in this study, please sign your name below.

Subject's signature or fingerprint

Witness to Consent Procedure

Signature of Investigator

Date

Note: *Signed copies of this form must be retained on file by the PI and a copy of the consent form given to the participant*

If you agree to participate in this study, please sign your name below.

Subject's signature or fingerprint

Witness to Consent Procedure

Signature of Investigator

Date

Note: *Signed copies of this form must be retained on file by the PI and a copy of the consent form given to the participant*

Questions

(Answer any questions that participants may have and begin the discussion)

Perceptions of poverty

1. How would you identify a poor person in this community?

Utonya kumanya mundu ng'ya ata kisioni kii ?

Probe.*Kuliilya*

2. How would you identify a rich person in this community?

Utonya kumanya mundu muthwii ata kisioni kii?

Who owns the land around the village?

Meaning of Development

I would like us to begin by discussing the meaning of development from your perspective

3. What is development?

Probe: Whether it's a personal, national or international issue

Probe: poverty alleviation

Probe: improvement in health (maternal, child, other)

Probe: improvement in demographic outcomes

Nienda twambiisye na kuneena yiulu wa maeendeo, kumana na mawini menyu.

Maendeo ni kyau?

Probe: Kimundu mwene(binafsi) va nthi kana nthi sya nza ingi ni ta meva?

Probe: Ni maeendeo ta meva makumina ukya?

Probe: Ni maeendeo ta meva matonya kuukilya uima wa mwii (mandu ma usyai, syana etc)

Probe: Ni maeendeo ta meva matonya kuukilya kila mundu

4. What does development mean to you as a resident of Kitonyoni/Mwania?

Probe the things that constitute development: education, roads, electricity, water, more income, market for agricultural commodities, health care, poverty alleviation.

Probe: Ask them to rank what they have mentioned in order of importance and give reasons for this ranking.

Maendeo ni kyau kwaku ta mtui wa Kitonyoni/Mwania?

Probe: Maendeo ta kisomo, malelu, stima, kivu, kwongeleka kwa ukwati, soko ya usyao w anima, uima wa mwii, kumina ukya.

Probe: Kwa ndavyei kati wa maeendeo(miradi) ila mwaweta (mentioned) ni yiva yi vata muno mbee wa ila ingi? (give reasons for this ranking)

Niki? (Mention no 1) kya vata?

Niki? (Mention no 2) kya vata?

5. What does development mean to you as a **(young person/ woman/ man)** in this community?

Ta wi muika, kiveti/ mutunia maeendeo ni kya kwaku kisioni kii?

6. What does development mean to you as a **(young person/ woman/ man)** in Kenya?

Ta wi muika /kiveti mutumia maeendeo ni kyau katika nthi yitu ya Kenya

7. Do you view development as a sponsorship or partnership?

Probe: Sponsorship by the government

Sponsorship by donors

Partnership between community members and the government

Partnership between the government and the international community/donors

Partnership between the government/the community and the international community/donors

Kwa mawoni menyu, maendeeo ni utethyo kana ni ngwatanio?

Probe: **Utethyo kuma ki silikali**

Utethyo utewa wa silikali

Ngwatanio kati wa andu ma kisio na silikali

Ngwatanio kati wa silikali na nthi sya nza

Ngwatanio kati wa silikali/ kisio na nthi sya nza

Development in Kitonyoni/Mwania

Now I would like us to discuss the level of development in this community

8. What would you say is the level of development in this community?

Probe: Ask respondents to rank the community's level of development on a scale of 1-5 with 1= referring to highly developed

2= moderately developed

3=developed

4=less developed

5=not developed

Probe: Ask them to give reasons for the selected answer

MAENDEEO KITONYONI/MWANIA

Yu nienda tuncene kwango kya maendeeo vaa Kitonyoni/Mwania kwa ujumla kivite va? (Ki yiulu , katikati kana kii nthi?)

of 1-5 with 1= referring to highly developed

2= moderately developed

3=developed

4=less developed

5=not developed

9. What efforts are being made to drive/aid development in this community?

Ni mivango myau yi endee kwikwa kuthetya maendeeo kisioni kii?

Probe: Kitonyoni/Mwania, Makueni, Ukambani region

10. What efforts are being made to drive/aid development in the country?

Ni mivango myau yi endee kwikwa kuthethya maendeeo kati ya nthi yitu ya kenya?

11. What is your role as a (young person/woman/man) in development of your community?

Ta muika/Kiveti/Mundu ume wia waku ni mwau kati ka kisio kyaku?

12. What is your role as a (young person/woman/man) in development of the country?

Ta muika/Kiveti/Mundu ume wia waku ni mwau kati ka maendeeo ma nthi yitu ya Kenya?

How can these development efforts be reinforced?

Probe: By whom?

Maendeeo aa matonya kululumiliilwa ata?

Probe: Na nuu?

Development efforts in the community/country

Now I would like us to discuss the various development efforts in the country and this community

Yu nienda tuncene yu=iulu wa maendeeo ma kivathukany'o kati ka Kenya na kisio kii

13. What are the roles of development committees (DDCs)?

Wia wa komiti sya maendeeo ni mwau?

14. How do development committees contribute to development?

Komiti ithi sya maendeeo isangiaa ata kati ka maendeeo?

15. What are the roles of Local Authorities in development?

Wia wa kanzu ni maendeeoni ni mwau?

16. What is the government's contribution to rural development?

- Probe:** Funding, LATF, CDF,
Musango wa silikali kati ka maendeeo(rural)
Probe: Funding, LATF, CDF, (council initiative)
17. What development initiatives are currently ongoing in your community?
Ni matambya meva ma maendeeo maendee kisioni kyaku?
18. What development initiatives are currently ongoing in the country?
Ni matambya meva ma maendeeo maendee kati ka nthi yitu ya Kenya?
19. Who should be responsible for development in your community?
Probe: reason/s for their responses
Nuu ula wailite kwithiwa ee muungami wa maendeeo kisioni kyaku?
Probe: Niki?
20. Who should be responsible for development in the country? Why?
Nuu ula wailitwe kwithiwa ee muungamii wa maendeeo kati ka nthi ya Kenya? Na niki?
21. Whose responsibility is it regarding development currently being undertaken by international aid organizations?
Ni jukumu yau kati ka maendeeo ala maendee ni kwikwa ni nthi sya nza?
22. For how long should international aid be given to aid rural development?
Probe: reason/s for their responses
Ni ivinda yi ana ata utethyo wa nthi sya nza wailitwe unenganwa kutethya maendeeo rural? Nikii?
23. What should international funding be supporting?
Probe: Health, education, agricultural development, water, climate change etc
Probe: Reasons for these responses
Utethyo wa kuma nza(international funding) wailite uitethya kyau?
Probe: Uima wa mwii, kisomo, uimi,kiwu, kusenzya kwa nzeve(masingira) kwaa mbua
Probe: Reasons for these responses
24. Should such funding be supporting programs like climate change and why?
Utethyo usu ni wailite ni kutethya kana kuthetheesya kusenzya kwa nzeve(masingira) kwaa mbua
- Is there anything that you would like to add to our discussion?
Yu twii minia ve undu ungi mwinawo mutonya kuweta ukonetye kila twa neenea umuthi?
 Thank you for taking the time to talk with me today. What you have shared has been extremely helpful. I've been asking so many questions – do you have any questions for me?
Ni muvea muno kwa kuosa mwanya uso na kuvika vaa. Kila mwaneneea ni kya vata muno. Nimutonya kwithiwa mwina makulyo mukulya?

[Answer any questions that the participants have]

END

Appendix 8: Questionnaire for the survey on perceptions of development

ENGLISH		Questionnaire no.
UNIVERSITY OF SOUTHAMPTON		Household no.
Public perceptions of development, participation in development and relationship with wellbeing		Village
Oct-12	Women's (18-49 years) and Men's (18-54) questionnaire	
Consent Form		
PURPOSE OF STUDY:		
VATA WA UKUNIKILI UU:		
Hello, my name is _____. We are conducting a study in this community to learn how people understand development. We would like to know your views and opinions about development, for instance the things that you consider to be important in the development of this community, development efforts being undertaken in this community and community members' contribution to these efforts. We would also like to gain an understanding into the health of people in this community in relation to their views on development. You were selected for this study because your HH is one of the 390 in Kitonyoni and Mwanja sub locations selected for this study. This study is being conducted as part of the requirement for the MPhil/PhD degree in Social Statistics by Ms. Hildah Essendi, studying at the university of Southampton in the United Kingdom.		
Uvoo, kwa isyitwa nitawa _____. Tuendeesye ukunikili tumanye undu andu ma utuini uu maelewa ni maendeeo. Twiukulya kwa ndaia utumanyithye mawawoni maku iulu wa maendeeo, kwa muelekana, maundu ala utalaa ta ma vata muno kwa maendeeo ma kisio kii, maendeeo ala methiitye utuini uu, na mitalatala ila yikiitye ni andu ma kisio kii kulingana na maendeeo. Tweeka kwaku nundu musyi waku ni umwe wa misyi ingi 390 kisoni kya Kitonyoni na Mwanja ila syasakuwe nthini wa ukunikili uu. Ukunikili uu niwavata muno kwa Ms. Hildah Essendi ula ukusomea degree ya Professor (PhD), sukulu nene Southampton Ungelesa (UK)		
PROCEDURES:		
If you agree to take part in this study, you will be asked questions about your personal details, your health, and that of your children. The interview will take approximately 20 minutes of your time. In addition, we will take your height and weight and that of your children. Questions on measures of fertility and reproductive health are among those that will be asked about your health. Asking these questions is important because they will help the researcher to understand your wellbeing.		
MUTALATALA WA UKUNIKILI UU		
Twi ukulya kwa ndaia unenge ndatika 20. Nthini wa ukunikili uu, Twienda kumanya iulu waku, uimu waku wa mwii(afya) na ula ya syana syaku. Twiukuthima uasa, uito waku na wa syana syaku. Makulyo iulu wa usyai na umany'i iulu wa usyai nimeukulya nthini wa uima wa kimwii. Makulyo aa metonyethya kumanya iulu wa uimu waku wa mwii.		
RISKS/DISCOMFORTS:		
This interview is not expected to cause you any harm but if you feel uncomfortable with some of the questions you can choose not to answer any question(s) but can decide to continue with the interview.		
Ukunikili uu tiwa kuuthathithya lakini wina uthasyo kulea kusungia makulyo ala matekwendeesya.		
BENEFITS:		
The results of the study will inform policy makers on the community's understanding of development and the important aspect in the development of this community. The D.O, Chief, Assistant Chief and the community will be informed of the findings when the study is completed. The data may also be used for further academic publications and for further studies on the community development.		
Mawoni ma ukunikili uu makamanyintya and ala masevasya miao undu andu maelewa ni maendeeo na maendeeo ala me vata kisio kii. Mawoni ma ukunikili uu makamathithya kwa D.O, kyivu, na and on the ma kisio kii na maituimika kwa vata wa kisomo iulu wa maendeeo.		
CONFIDENTIALITY:		
Your responses will be private and confidential. The information you give will be kept under lock for 10 years at the University of Southampton, after which they will be destroyed. The data may be used by others, interested in this topic, for secondary analysis, but the data will be stripped of individual identities before being given out, and that all who wish to access the data will sign a confidentiality clause and agree to use the data for research purposes only.		
KIMBITHI KYA UKUNIKILI UU		
Mawoni maku makethiya kimbithi. Mawoni na mausungio ma ukunikili uu makaiwa kwa myaka Ikumi memavingie sukulini muneee wea Southampton, itina mayanangwa. Mausungio aa makatumika kwa vata wa kisomo lakini masiyitwa maku makethiya kimbithi. Andu ala maketikilwa kusoma mawoni uu makatumia mawoni aa kwa vata wa kisomo kikyoka.		
VOLUNTARINESS		
Your participation is voluntary and you have the right to stop the interview at any time without a problem. However, your views are important and we hope that you will agree to the interview.		
KWIYUMYA		
Mawoni maku ni ma vata muno nthini wa ukunili uu na twiukwanya nukwitikila kusungia makulyo maitu. Wina luusa wa kuungamitya kuendee na ukunikili uu nundu undu uu ni wa kwiyumya.		
WHOM TO CONTACT		
If you want to talk to anyone about this research study, or if you think you have been treated unfairly or joining this study has hurt you, contact Ms. Hildah Essendi on telephone number 0720334239 or National Council for Science and Technology on telephone number 02 2241349 or 02 310571.		
NAMBA SYA SIMU		
Wendeewa kuneena naitu iulu wa ukunikili uu, kethiwa wina manunguniko wina luusa wa kuneena na Ms Hildah Essendi; Namba ya simu 0720334239, kana National Council fo Science and Technology, kwa namba ya simu; 02 2241349/ 02310571.		
Supervisor: Professor Nyovani Madise, Tel No. +44 (0)23 8059 2534, Email: N.J.Madise@soton.ac.uk		
Muungamii: Professor Nyovani Madise, Tel No. +44 (0) 23 8059 2534, Email: N.J Madise@soton.ac.uk		
If you agree to participate in this study please sign your name below.		
Ikia saii kethiwa nukwitikila kwithiwa Nthini wa ukunikili uu		
_____ Subject's signature or fingerprint/Saii		_____ Witness to Consent Procedure/Ngusi ya Kuikithya
_____ Signature of Investigator Saii ya Mukunikili		_____ Date/Matuku

Section 2			
Kilungu Kya Keli			
2.0 DEVELOPMENT IN THE COMMUNITY			
MAENDEEO KISIONI			
Now I would like to ask you some questions regarding your perception of development for you as a person and in this community ASK Q 2.1a AND 2.2a BEFORE GOING TO Q2.1b AND 2.2b. FINISH WITH Q2.1c AND 2.2c			
		2.1a	2.1b
		2.1c	
Niukulya makulyo iulu wa mawoni maku iulu wa maendeeo			
2.1a	What does personal development mean to you? GO TO Q 2.2a	Improved diet/adequate food	1 1 1
		<i>Liu wa afya/ Liu mwianu</i>	
	Maendeeo ma mundu nikyau?	Eradicating disease	2 2 2
		<i>kumina movau</i>	
	CIRCLE ALL THAT ARE MENTIONED	Improved access to health care	3 3 3
		<i>Kwithiwa na masivitali maingi</i>	
		Owning new assets eg mobile phone	4 4 4
		<i>Kwithiwa na syindu sya maendeeo</i>	
2.1b	And now, what factors are important for your community's development or what does community development mean to you? GO TO Q 2.2b	Improved dressing	5 5 5
		<i>Mwikiile museo wa ngua</i>	
	CIRCLE ALL THAT ARE MENTIONED	Starting to rear livestock	6 6 6
		<i>Kwambiisya kuithya indo</i>	
		Improved transport means	7 7 7
		<i>Maendeeo ma malelu</i>	
		Improved housing	8 8 8
		<i>Maendeeo ma nyumba</i>	
		Improved fuel type	9 9 9
		<i>Maendeeo ma syindu sya miuwile(Stima, Ngu, Mauta taa)</i>	
2.1c	And now, what factors are important for your country's development or what does national development mean to you? GO TO Q 2.2c	Improved farming methods	10 10 10
		<i>Nzia nzeo sya uimi</i>	
	Maendeeo ala maseo kwa nthi yaku?	Proper nurturing of children i.e enough food, education, moral and religious guidance	11 11 11
		<i>Kueya syana nesa, kwa mvano, liu mwianu, kisomo, tavia nzeo, na kutongoewa ikanisani</i>	
	CIRCLE ALL THAT ARE MENTIONED	Having/getting a family	12 12 12
		<i>Kwithiwa na musyi na familia</i>	
		Owning property	13 13 13
		<i>Kwithiwa na Mali</i>	
		Able to meet family's basic needs	14 14 14
		<i>Kwanisya mavata ma familia</i>	
		Reduced poverty	15 15 15
		<i>Ukya muoleku</i>	
		Well-equipped & accessible health facilities	16 16 16
		<i>Kwithiwa na sivitali nzeo na syina mio ya utakitali</i>	
		Well-equipped and accessible schools	17 17 17
		<i>Masukulu make nesa, mena symio ya kisomo na matonya kuvikika</i>	
		Improved roads	18 18 18
		<i>Malelu maseo</i>	
		Accessible markets for farmers' produce	19 19 19
		<i>Masoko mevakuvi mauteea syindu sya uimi</i>	
		Having enough & clean water in all HH	20 20 20
		<i>Kwithiwa na kiwu kianu na kitheu kila musyi</i>	
		Electricity connection	21 21 21
		<i>Kwithiwa na sitima</i>	
		Freedom of movement and expression	22 22 22
		<i>Kwithiwa na uthyasyo wa kuneena na kwiyelesya</i>	
		High self-esteem	23 23 23
		<i>Kwithiwa na ukumbau wa kiimundu</i>	
		Involvement of women in leadership	24 24 24
		<i>Aka kulikwa maunduni ma utongoi</i>	
		Good leadership that ensures peace & development among everyone	25 25 25
		<i>Utongoi museo ula ukuikiithya muo na maendeeo kwa kila umwe.</i>	
		Having enough leisure time & facilities	26 26 26
		<i>Kwithiwa na mavinda ma sitalee na kundu kwa sitalee</i>	
		Involvement of all in development matters	27 27 27
		<i>kulikwa kwa kila umwe nthini wa maundu ma maendeeo</i>	
		Progress in life	28 28 28
		<i>Maendeeo ma maisha</i>	
		Other (Specify)/Maundu ang Q 2.1a	98a
		Other (Specify)/Maundu ang Q 2.1a	98b
		Other (Specify) /Maundu ang Q 2.1a	98c

2.8	You have said that the most important factor for underdevelopment in this community is (REPEAT ANSWER GIVEN AT Q2.6), how much do you want to solve this development problem?	Very much 1 Quite a lot 2 Not bothered either way 3 Not much 4 Not at all 5															
2.9	How helpful is the government in solving these problems?	Very helpful 1 Fairly helpful 2 Neither helpful nor unhelpful 3 Fairly unhelpful 4 Very unhelpful 5															
2.10	How interested is the government towards developing your community?	Very helpful 1 Fairly helpful 2 Neither helpful nor unhelpful 3 Fairly unhelpful 4 Very unhelpful 5															
2.11	How interested is the international community/donors towards developing your community?	Very helpful 1 Fairly helpful 2 Neither helpful nor unhelpful 3 Fairly unhelpful 4 Very unhelpful 5															
2.12	How much do you think the government can help solve these development issues that you have mentioned?	Very much 1 Quite a lot 2 Don't know/either way 3 Not much 4 Not at all 5															
2.13	How much do you think the international community/donors can help solve these development issues that you have mentioned?	Very much 1 Quite a lot 2 Don't know/either way 3 Not much 4 Not at all 5															
2.14	Would you prefer for development matters in this community to be handled by... The community? The government? The international community/donors Others?	<table border="1"> <thead> <tr> <th></th> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr> <td>The community</td> <td>1</td> <td>2</td> </tr> <tr> <td>The government</td> <td>1</td> <td>2</td> </tr> <tr> <td>The international community/donors</td> <td>1</td> <td>2</td> </tr> <tr> <td>Others (specify)</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		Y	N	The community	1	2	The government	1	2	The international community/donors	1	2	Others (specify)	1	2
	Y	N															
The community	1	2															
The government	1	2															
The international community/donors	1	2															
Others (specify)	1	2															

2.15	Now I would like to read you some statements regarding your participation in development in this community. Please tell me how much you agree or disagree with the following statements. The responses are 'Strongly Agree', 'Agree', 'Disagree', and 'Strongly Disagree'	SA A NA D SD
1.	People in this community are normally involved in decision-making of development projects in this community	1 2 3 4 5
2.	Community members' opinions are always incorporated in development matters in this community	1 2 3 4 5
3.	Both men and women's opinion is given equal consideration in development matters in this community	1 2 3 4 5
4.	Your individual development is a responsibility of the government	1 2 3 4 5
5.	Community development in this area is the responsibility of the government	1 2 3 4 5
6.	The international community has a responsibility to help with our national development eg climate conditions	1 2 3 4 5
7.	The Kenyan government is able to facilitate its own development with minimal assistance from the international community	1 2 3 4 5

Now I would like to get your opinion about the involvement of community members in community development projects

2.16	How satisfied are you with the level of your personal involvement in community development activities?	Very satisfied 1 Fairly satisfied 2 Neither satisfied nor dissatisfied 3	P C 1 1 2 2 3 3
2.17	How satisfied are you with the level of community involvement in community development activities?	Very satisfied 4 Fairly satisfied 3 Neither satisfied nor dissatisfied 2 Fairly dissatisfied 1 Very dissatisfied 0	4 4
2.18	How do you feel about being asked to participate in development activities in your community?	Very happy 1 Fairly happy 2 Neither happy nor unhappy 3 Fairly unhappy 4 Very unhappy 5	
2.19	How much do you think that development in your community is actually going to improve?	Very much 1 Quite a lot 2 Don't know/either way 3 Not much 4 Not at all 5	

2.20 Imagine a 10-step ladder where on the bottom, the first step, stand the least developed people, and on the highest, 10th stand the most developed
[SHOW THE RESPONDENT THE LADDER]

On which step are you today?

On which step is your HH today?

On which step are most of your neighbors today?

On which step are most of your friends today?

7.0	Nutritional Assessment
WEIGHT AND HEIGHT MEASUREMENT	
Now I am going to take your height and weight	
RESPONDENT'S ANTHROPOMETRY	
7.8	ENTER THE HEIGHT OF THE WOMAN/MAN IN CM (TO THE NEAREST 0.1CM)
7.9	ENTER THE WEIGHT OF THE WOMAN/MAN IN KG
7.10	RECORD ANY GENERAL COMMENTS ON WOMEN/MEN ANTHROPOMETRIC MEASUREMENT
<div style="border: 1px solid black; height: 30px; width: 100%;"></div> <div style="border: 1px solid black; height: 30px; width: 100%;"></div>	
8.0	END TIME
8.1	RECORD ANY GENERAL COMMENTS ON QUESTIONNAIRE
<div style="border: 1px solid black; height: 30px; width: 100%;"></div> <div style="border: 1px solid black; height: 30px; width: 100%;"></div>	

Appendix 9: Household questionnaire for the Replication of Rural Decentralised off-grid Electricity Generation through Technology and Business Innovation Project

ENGLISH		Questionnaire No.				
UNIVERSITY OF SOUTHAMPTON/IMPERIAL COLLEGE/AFIDEP SOCIO-ECONOMIC IMPACT ASSESSMENT OF RURAL DECENTRALISED OFF-GRID ELECTRICITY GENERATION SCHEMES IN RURAL KENYA		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> </tr> </table>				
Apr-11	Baseline Survey-Household questionnaire	Village Utui				
Consent Form						
PURPOSE OF STUDY:						
Hello, my name is _____. I am working for AFIDEP as a Research Assistant. We are conducting a study in this community to gain an understanding into the way people live. We would like to know your views and opinions about the state of health and poverty in this community. Your HH is one of over 400 HHs in _____ sub location selected for this study. The University of Southampton, Imperial College with and the African Institute for Development Policy (AFIDEP) are undertaking this study.						
<i>Uvoo waku, nitawa _____ . Nithukumaa na AFIDEP. Twika ukunikili nduani ino nikana tuelewe yulu wa mikalle ya andu. Twenda umanya mawoni ma uima wa mwii na ukya nduani (community) ii. Usakuwe ta umwe wa ala meukulwa makulyo aa nundu musyi waku numwe katika misyi 400 sub location uu wa _____ ula usakutwe kwoondu wa kisomo kii na usakuwe kwisila nzia ya kutha kalata na wavalukilwa withwe vi umwe wa ala meutumika nthini wa kwosanya kwa umanyi uu. University ya Southampton, Imperial College matetheanisye na African Institute for Development Policy (AFIDEP) nimo mekwithiwa maitethya via uu.</i>						
PROCEDURES:						
If you agree to take part in this study, you will be asked questions about your HH income, source of livelihood and sources of energy for lighting and cooking. In addition, we would like to ask questions about children's schooling and the health of women and children in this HH. We would also like to take the weight and height of women and children in this household. The interview will take about 45 minutes of your time. You will not be paid any money by taking part in this study and we would like to contact you again in the future for a follow-up study.						
MUTALATALA WA MAUNDU						
<i>Ethiva nukwikila uusike nthini wa uthiani wa umanyi uu, wikulwa makulyo makoneteye maundu makoneteye ukwati wa musyi kwenyu, umo wa kyauya kya kila ivinda na umo wa ngu kuvuwa mwaki na kuu. Vamwe na ou nituukukulya makulyo makoneteye kusoma kwa syana syaku na uima wa mwii wa andu nyumba ino. Nituthima uasa na uito wa aka na syana vaa musyi kwaku. Makulyo mekuu vandu wa ndakika syaku 45. ndukuwa mbesa kwoondu wa kwitikila kukulwa makulyo na notwendeewe nikuwasiliana naku ivinda yukite kwoondu wa uthiani wa kutiyya uu.</i>						
RISKS/DISCOMFORTS:						
This interview is not expected to cause you harm but if you feel uncomfortable with some of the questions you can choose not to answer them but may continue with interview.						
MIISYO YA KUUSIKA:						
<i>Wia uu wa makulyo uikwikwatiwa kukuetea muisyo o na umwe indi weewa utemwanie ni makulyo amwe wina uthasyo wa kulea kusungia ikulyo kana makulyo indi no usakue we mweene kuendeeya na kusungia makulyo.</i>						
BENEFITS:						
The results of the study will inform policy makers on the issues that people in this community face regarding poverty, health, education and use of energy. The results will also help implementers assess impact of electricity on poverty, health and education. The D.O, Chief, Assistant Chief and the community will be informed of the findings when the study is completed.						
UUNIKO:						
<i>Mosungio ala mekumana na uthiani uu wa maundu makatetheesya andu ala mavangithasya maundu ma maendeeo yulu wa mathina ala andu ma ndua ii makomanaa namo makoneteye ukya, mathina ma uima wa mwii, kisomo na mitumile ya ngu (ngu sya uvuwa mwaki, sitima, vetulo na mauta ma ta). Vamwe na uumosungio asu makatetheesya andu ala mekaa kianisya kila kivangithye kwikuua na kumanya maendeeo makoneteye sitima yulu wa ukya, uima wa mwii na kisomo. Ndioo, Munini wa kivu na andu ma ndua makedeewa yulu wa mosungio aa uthiani uu wa umanyi wathela.</i>						
CONFIDENTIALITY:						
Your responses will be private and confidential. They will not be shared with anyone other than members of this team. The information you give will be kept under lock for 10 years at the AFIDEP offices after which the forms will be destroyed.						
KIMBITHI:						
<i>Mosungio maku mekuwa kwa nzia ya kimbithi. Mosungio maku maitavwa andu angi ateo andu ma kikundi kii. Maundu ala ututavya makavingiwa vandu na kivuli vandu wa myaka 10 movisini ma AFIDEP na itina wa ivinda yiu mavoomu may'angwa.</i>						
VOLUNTARINESS:						
Your participation is voluntary and you have the right to stop the interview at any time without any problem. However, your views are important and we hope that you agree to answer all the questions.						
KWA NGENDA						
<i>Kuusika kwaku ni kwa ngenda na wina uthasyo kuungama mokulyo ivinda o yonthe vate na thina. Ateo, mawoni maku ni ma vata muno na twikwata nukwikila tuukulye makulyo.</i>						
WHOM TO CONTACT:						
If you want to talk to anyone about this research study, or if you think you have been treated unfairly or joining this study has hurt you, contact Dr. Eliya Zulu, Director, AFIDEP at telephone number 0722523198 or Kenya Medical Research Institute (KEMRI) at telephone number 2722541, 0722205901 or 0733400003.						
ULA UTONYA KUWASILIANA NAKE:						
<i>Ethiva nukwenda kuneena na mundu yulu wa uthiani uu, kana ethiva woona ta wakuwa nai kana kuusika nthini kusungia makulyo aa ni kwa kuetea uthuku, nouwasiliane na Ndakitali Zulu, Munene wa AFIDEP ukitumia namba ii sya simu 0722523198 kana Kenya Medical Research Institute nambani ii ya simu, 2722541, 072225901 kana 0733400003</i>						
<i>If you agree to participate in this study please sign your name below. Weetikila kuusika kusungia makulyo kwa ndaiya mbikiyya saii vaa</i>						
<hr/>	<hr/>	<hr/>				
<i>Subject's signature or fingerprint</i>	<i>Saii wa kalamu kana wa kyaa</i>	<i>Witness to Consent Procedure Ngusi ya kuikiithya mutalatala</i>				
<hr/>	<hr/>	<hr/>				
<i>Signature of Investigator</i>	<i>Saii wa muthiani</i>	<i>Date Matuku</i>				

START TIME	IDENTIFICATION							
SUB LOCATION NAME _____ NAME OF HOUSEHOLD HEAD _____ NAME OF VILLAGE _____ HOUSEHOLD NUMBER _____ GPS COORDINATES _____								
INTERVIEW VISITS								
	1	2	3	FINAL VISIT				
DATE				DAY				
				MONTH				
				YEAR				
INTERVIEWER'S NAME				INT. NUMBER				
RESULT				RESULT				
NEXT VISIT: DATE								
TIME								
*RESULT CODES: 1 COMPLETED 2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT 3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME 4 POSTPONED 5 REFUSED 6 DWELLING VACANT OR ADDRESS NOT A DWELLING 7 DWELLING DESTROYED 8 DWELLING NOT FOUND 9 OTHER _____ (SPECIFY)				TOTAL PERSONS IN HH				
				TOTAL ELIGIBLE WOMEN (18-49)				
				TOTAL ELIGIBLE CHILDREN (0-5)				
				ID CODE OF RESPONDENT TO HH QUESTIONNAIRE				
SUPERVISOR		FIELD EDITOR			OFFICE EDITOR		KEYED BY	
NAME		NAME		NAME		NAME		
CODE		CODE		CODE		CODE		
HOUSEHOLD SCHEDULE								
B01	B02	B03	B04	B05	B06	B07	B08	
	NAME	What is [NAME]'s relationship to the HH Head? We [NAME]'s <i>aileny'e/atainie ata na mwene musy?</i>	SEX	What is [NAME]'s religion? <i>Ndini ya [NAME] ni yiva?</i>	What is [NAME]'s employer? <i>We [NAME]'s aandikitiwe ni?</i>	What is [NAME]'s date of birth? <i>(NAME) asyaiwe matuku means</i>	How old is [NAME]? IF 6 YEARS OR OLDER, GIVE YEARS ONLY. IF LESS THAN 6 YEARS IN AGE, GIVE YEARS AND MONTHS	
I	MAKE A COMPLETE LIST OF ALL INDIVIDUALS WHO NORMALLY LIVE AND EAT THEIR MEALS TOGETHER IN THIS HOUSEHOLD, STARTING WITH THE HEAD OF HOUSEHOLD	HEAD	1					
D		SPOUSE	2	1=None	1=Private Co.			
C		SON/SON-INLAW	3	2=Traditional	2=Private indivi			
O		DAUGHTER/D-INLAW	4	3=Islamic	3=Government			
D		FATHER/MOTHER	5	4=Catholic	4=State-owned			
E	(CONFIRM THAT HOUSEHOLD HEAD IS SAME AS HOUSEHOLD HEAD LISTED ON COVER)	SISTER/BROTHER	6	5=Protestant	5=Self			
		GRANDCHILD	7	6=Other religion	6=None			
		OTHER RELATIVE (SPECIFY)	8	7=Other	7=Other			
		SERVANT (live-in)	9	MALE=1 (Specify)	Specify		97 AND OVER, CODE 97. AGE IS NOT KNOWN, CODE 98. NOT STATED, CODE 99.	
		OTHER NON-RELATIVE (SPECIFY)	10	FEMALE=2			YEARS MONTHS	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

EDUCATION KISOMO									
IF AGE 5 YEARS OR OLDER									
I D	EVER ATTENDED SCHOOL					IF AGE 5-24 YEARS			
	16		17			18		19	
	Has [NAME] ever attended school?		What is the highest level of school [NAME] has attended?			Is [NAME] currently attending school or did [NAME] attend school in 2010? We [NAME] yu niuendeeeye na sukulu? Kana [NAME] aathi sukulu mvakani uu wa 2010?		During this school year, what level and grade is/was [NAME] attending? Mwakani uu, [NAME] e kilasi kana ethiitwe e kilasi kya keana?	
	We [NAME] aathi sukulu		Ni kiwango kya yiulu kiva [NAME] uvikite?						
			SEE CODES BELOW						
			What is the highest grade [NAME] completed at that level? Ni kilasi kya yiulu kiva [NAME] wavikie na akavula?						
			SEE CODES BELOW						
	Y	N	LEVEL	GRADE	Y	N	LEVEL	GRADE	
			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
	NEXT LINE				NEXT LINE				
	Y	N	LEVEL	GRADE	Y	N	LEVEL	GRADE	
			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
	NEXT LINE				NEXT LINE				
	Y	N	LEVEL	GRADE	Y	N	LEVEL	GRADE	
			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
	NEXT LINE				NEXT LINE				
	Y	N	LEVEL	GRADE	Y	N	LEVEL	GRADE	
			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
	NEXT LINE				NEXT LINE				
	Y	N	LEVEL	GRADE	Y	N	LEVEL	GRADE	
			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
	NEXT LINE				NEXT LINE				
	Y	N	LEVEL	GRADE	Y	N	LEVEL	GRADE	
			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
	NEXT LINE				NEXT LINE				
	Y	N	LEVEL	GRADE	Y	N	LEVEL	GRADE	
			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
	NEXT LINE				NEXT LINE				
	Y	N	LEVEL	GRADE	Y	N	LEVEL	GRADE	
			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
	NEXT LINE				NEXT LINE				

CODES FOR Qs 17 AND 19: EDUCATION LEVEL			GRADE	
1= Primary	3= Higher	8= Don't know	00= Less than 1 year completed	(USE '00' FOR Q 17 ONLY. THIS CODE IS NOT ALLOWED FOR Q 19)
2= Secondary	6= Pre-primary			98= Don't know

1.0 HOUSEHOLD CHARACTERISTICS: WATER, SANITATION AND ENERGY USE		MAUNDU MAKONETYE MISIYI: KIW'U, UTHEU NA MITUMILE YA NGU	
WATER (ASK HH HEAD OR KNOWLEDGEABLE MEMBER OF HH)			
1.1	What is the main source of water for members of your HH for the past 1 month for _____ <i>Mwithitwe muikwata kiwlu kyautumia vaa musyi kuma va muno muno?</i>	Piped water <i>Kiwlu kya muveleki</i> Piped into dwelling <i>Kietetwe nyumba nthini</i> 1 Piped to yard/plot <i>Kietetwe nza</i> 2 Public tap/stand pipe <i>Muveleki wa andu onthe</i> 3 Tube well or borehole <i>Kithima kya muvaivo kana koo</i> 4 Dug well <i>Kithima kinzitwe</i> Protected well <i>Kithima kyakiie</i> 5 Unprotected well <i>Kithima kite kyakiie</i> 6 Water from spring <i>Kiwlu kya nthongo</i> Protected spring <i>Nthongo mbakiie</i> 7 Unprotected spring <i>Nthongo ite mbakiie</i> 8 Rainwater <i>Kiwlu kya mbua</i> 9 Tanker truck <i>Kiwlu kya iloli</i> 10 Cart with small tank <i>Ikasya yina iviva/katangi kanini</i> 11 Surface water (river/dam/lake/pond/ stream/canal/irrigation channel) 12 <i>Kiwlu kya nthi (usi/silanga/lia/ kasilanga/kanda/mutau wa kiwlu/ mutau wa unyithya</i> Bottled water <i>Kiwlu kya suva</i> 13 Other <i>Vangi</i> 98 (Specify) (Va, kwaweta)	1.4
1.2	Where is that water source located? <i>Vala mukwataa kiwlu ni va?</i>	In own dwelling <i>Nyumba kwitu</i> 1 In own yard/plot <i>Nza kwitu/vulotini</i> 2 Elsewhere <i>Vandu vangi (Specify)</i> 3	1.4
1.3	How long does it take to go there, get water, and come back? <i>Mukuaa ivinda yiana ata kuthi vo?</i>	Minutes <i>Matakika</i> <input type="text"/> Don't know <i>Ndyisi</i> 96	
1.4	Do you use this source for your drinking water _____ All year? Only during the rainy season? Only during the dry season? <i>Ivinda ya mbuani yoka?</i> Kiwlu kya unywa mutavaa o vau _____ <i>Mwaka muima?</i> <i>Kana ivinda ya thano/munyao?</i> IF RESPONSE IS 1 SKIP TO 1.6	All year <i>Mwaka ukathela</i> 1 Only dry season <i>Ivinda ya thano yoka</i> 2 Only rainy season <i>Ivinda ya mbuani yoka</i> 3	1.6
1.5	In the other season, what is your main source of drinking water? <i>Mavinda ala angi kiwlu kya unywa mutavaa va?</i>	USE CODES FOR 1.1 <input type="text"/>	
1.6	How do you normally store water at home? <i>Kiwlu mwonoasya va musyi?</i>	Do not store any water at home <i>Tuyiaa kiwlu musyi</i> 1 Bucket/jerry can/drums <i>Ndooni/mutungini/iviani</i> 2 Water tank <i>Ilangi ya kiwlu</i> 3 Other <i>Vangi</i> 98 (Specify) <i>Va, kwaweta</i>	
1.7	How many 20 litres jerry cans does the HH on average consume per day? <i>Kwa muthenya mutumiaa mitungi yiana vaa musyi?</i>	Number <input type="text"/>	
1.8	How much does one jerry can of water cost on average by your HH? <i>Mitungi umwe uthooa mbesa siana?</i>	KSH <input type="text"/>	
1.9	Are there atleast 20 litres of water per person available per day (for drinking, cooking, personal hygiene etc) in the household? <i>Nivethiava ta mutungi wa lita ta 20 wa kila muntu kila muthenya</i>	Yes 1 No 2	
1.10	What was the total cost of water for your household last month for _____ <i>Mbilu kana thooa wonthe wa kiwlu musyini kwenyu mwai usu unavitie ni mbesa siana</i> FW: IF NONE, ENTER ZERO	KSH Drinking? <i>Kya unywa?</i> Bathing? <i>Kya uthamba?</i> Cooking? <i>Kya kuua?</i> Washing Livestock? <i>Kya unyithya indo?</i> Total cost of water	<input type="text"/>
1.11	Approximately how many jerry cans (20 litres) of water does this payment cover per month? <i>Mbesa isu wandavya ni ta sya mitungi yiana kwa mwei?</i>	Number Drinking <i>Kya unywa</i> Bathing <i>Kya uthamba</i> Cooking <i>Kya kuua</i> Washing <i>Kuvua</i> Livestock <i>Kya unyithya indo</i> Total	<input type="text"/>
1.12	Do you do anything to the water to make it safer to drink? <i>Ve undu mwikanaa na ikiwlu ni kana kwithiwe ki kiseo kwa unyuwa?</i>	Yes 1 No 2 Don't know 96	1.14
1.13	What do you usually do to make the water safer to drink? <i>Wikanaa na ikiwlu ata ni kana kithiwe ki kiseo kwa unyuwa?</i> Anything else? <i>Ve undu ungi wikanaa na kyo?</i> RECORD ALL MENTIONED.	Boil <i>Kutheukya</i> 1 Add bleach/chlorine <i>Kwika ndawa ya kilolini</i> 2 Strain through a cloth <i>Kusunga na kitambaa</i> 3 Use water filter (ceramic/ sand/ composite etc <i>Kusunga (na mbisu/kithangathi/muthanga)</i> 4 Solar disinfection <i>Kuthesya na sola</i> 5 Let it stand and settle <i>Kweteela kikalika</i> 6 Other <i>Undu ungi</i> 98 (Specify) <i>mwa, kwaweta</i> Don't know <i>Ndyisi</i> 96	

SANITATION (ASK HH HEAD OR KNOWLEDGEABLE MEMBER OF HH)		
1.14	What kind of toilet facility do members of your household usually use? <i>Mutumia muthemba wiva wa kyoo vaa musyi kwenyu?</i>	Flush or pour flush toilet(Kyoo kya ukuna /kwita kiwu 1 Flush to piped sewer system 2 Flush to septic tank 3 Flush to pit latrine 4 Flush to somewhere else 5 Flush, don't know where 6 Pit latrine (kyoo kya iima 7 Ventilated improved pit latrine 8 Pit latrine with slab 9 Pit latrine without slab/open pit 10 Composting toilet 11 Bucket toilet(Kyoo kya ndoo) 12 Hanging toilet/hanging latrine 11 No facility/bush/field(Kithekani/makuthuni) 12 → 1.17 Other 98 (Specify)
1.15	Do you share this toilet facility with other households? <i>Nimutumianiaa kyoo kii na andu ma misyi ingi?</i>	Yes 1 No 2 → 1.17
1.16	How many HHs use this toilet facility? <i>Ni misyi yiana ila itumiaa kyoo kii</i>	No. of households <input type="text"/> If less than 10 <input type="text"/> 10 or more households 95 Don't know 96

ENERGY (ASK HH HEAD OR KNOWLEDGEABLE MEMBER OF HH)		
1.17	What type of fuel does your household mainly use for cooking? <i>Muuaa na mwaki wa muthemba mwau muno vaa kwenyu musyi?</i>	Collected firewood 1 Purchased firewood 2 Grass 3 Parafin 4 Electricity 5 Gas/LPG 6 Charcoal 7 Biomass residue 8 Biogas 9 Straws/shrubs/grass 10 Agricultural crop 11 Animal dung 12 No food cooked in household 95 → 1.19 Other 98 (Specify)
1.18	What is the second type of fuel used for cooking? <i>Ni muthemba ungi wiva wa mwaki mutumiaa kwa kuua?</i>	USE CODES FOR 1.17 <input type="text"/> NA
1.19	What type of fuel does your household mainly use for lighting? <i>Ni muthemba wiva wa mwaki mutumiaa vaa musyi kwa kumulika/kukwetya taa?</i>	Collected firewood 1 Purchased firewood 2 Grass 3 Parafin 4 Electricity 5 Gas 6 Biogas 7 Straws/shrubs/grass 8 Agricultural crop 9 Dry cell (torch) 10 Candles 11 Rubber bands 12 Other 98 (Specify)
1.20	What is the second type of fuel used for lighting? <i>Ni muthemba ungi wiva wa mwaki mutumiaa kwa kumulika/kukwetya taa?</i>	USE CODES FOR 1.19 <input type="text"/> NA
1.21	Does household have installed solar panels in the dwelling? <i>Vaa musyi kwenyu nimwikiite solar</i>	Yes 1 No 2 → 1.23
1.22	What is the size of solar panels in watts? <i>Solar ila mutumiaa ni ya vinya (watts) wana ata?</i>	WATTS <input type="text"/>

1.23	Does household get power from KPLC? <i>Vaa musyi kwenyu nimukwataa sitima kuma kwa KPLC?</i>	Yes No	1 2	
1.24	Does household get electricity from generator? <i>Vaa musyi kwenyu nimukwataa sitima wa katuma?</i>	Own generator Neighbor's generator No Other (Specify)	1 2 3 98	1.26
1.25	How is the generator powered? <i>Katuma kaumasya mwaki va?</i>	Diesel Petrol Solar Other (Specify)	1 2 3 98	
1.26	Does household get electricity from car or motorcycle battery? <i>Vaa musyi kwenyu nimukwataa sitima wa mbetili ya ngali kana ya kamota?</i>	Car Motorcycle Both No	1 2 3 4	
1.27	What is household's main source of electricity? <i>Vaa musyi kwenyu mukwataa sitima muno muno kuma va?</i>	KPLC Community generator(Katuma ka ndua) Solar panels Own generator Car/motorcycle battery No electricity in the HH Other (Specify)	1 2 3 4 5 6 98	1.29
FOR HOUSES WITH ELECTRICITY AS A SOURCE OF ENERGY ELSE, SKIP TO 1.31				
1.28	What was the total cost for electricity in the household over the last month? <i>Mbili ya sitima vaa musyi mwei ula unavite inai mbesa siana?</i>	IF THE HOUSEHOLD RECEIVED AN ACTUAL BILL, REFER TO THE LAST BILL RECEIVED. INCLUDE OTHER PAYMENTS/COST OF ELECTRICITY WHICH DO NOT COME ON A WRITTEN BILL. KSH [] [] [] [] [] [] [] []		
1.29	What is the total cost of lighting last month (excluding electricity)? <i>Mwai usu unavite munatumie mbesa siana kwa kwakanya'taa (eka sitima)?</i>	IF HH HAS NO ELECTRICITY, GO TO 1.31 KSH [] [] [] [] [] [] [] []		
1.30	Does HH usually have any electricity working in the dwelling? <i>Sitima vaa kwenyu musyi nutumikaa?</i>	Yes No	1 2	1.32
1.31	Although you do not have electricity here, are there HH connected within 100m from the dwelling? <i>Onavala vaa kwenyu vahi sitima, ve misyi vaa vakuvi na kwenyu yi sitima ta matambya 100 kuma vaa kwaku?</i>	Yes No	1 2	
1.32	Did household use small torch batteries (dry cells) in the last one month? <i>Vaa kwenyu musyi nimunatumie mavia ma tosi mwai umwe muthelu?</i>	Yes No	1 2	1.35
1.33	How many small torch batteries (dry cells) did household use in the past one month? <i>Ni mavia meana ata ma tosi munatumie vaa kwenyu musyi mwai umwe muthelu?</i>	NUMBER [] [] [] [] [] [] [] []		

1.34	What is the value of these batteries (dry cells) used in the past one month? <i>Matumie mbesa siana ata kua mavia mwei usu uthellie?</i>	KSH [] [] [] [] [] [] [] []		
ENERGY SOURCES.				
COMPLETE 1.29- 1.37 FOR EACH ENERGY SOURCE BEFORE PROCEEDING TO THE NEXT ENERGY SOURCE.				
1.35	In the last 12 months, has your household used [ITEM]? <i>Vaa musyi kwenyu mwaatumia syindu ii nthini wa mwei 12 mithelu [ITEM]?</i>	a Collected firewood <i>Kuna ngu</i> b Purchased firewood <i>Kuthooa ngu</i> c Animal waste (Biomass residue) <i>Kyaa kya ng'ombe</i> d Straw/stalk (Biomass residue) <i>Mavya/mavuti</i> e Charcoal <i>Makaa</i> f Kerosene/paraffin <i>Mauta ma taa</i> g Gas/LPG <i>Ngasi yakuuwa</i> h Electricity <i>Sitima</i>	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	Y N
1.36	In the last 1 month, has your household used [ITEM]? <i>Vaa musyi kwenyu mwaatumia syindu ii nthini wa mwei umwe mithelu [ITEM]?</i>	a Collected firewood <i>Kuna ngu</i> b Purchased firewood <i>Kuthooa ngu</i> c Animal waste (Biomass residue) <i>Kyaa ng'ombe</i> d Straw/stalk (Biomass residue) <i>Mavya/mavuti</i> e Charcoal <i>Makaa</i> f Kerosene/paraffin <i>Mauta ma taa</i> g Gas/LPG <i>Ngasi yakuuwa</i> h Electricity <i>Sitima</i>	1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	Y N
1.37	What was the main purpose of this use? <i>Vata munene wa mitumie isu unai mwau?</i>	Boiling 1 Lighting 4 Heating 2 Other 5 Cooking 3	a [] b [] c [] d [] e [] f [] g [] h []	
1.38	What unit(s) of measure and quantity do you use for [ITEM]? <i>Mutumiaa kihimi kiva kuthima syindu ii?</i>	Bunch 1 Sack 6 Bundle 2 Debe 7 Heap 3 Gorogoro 8 Log 4 Tin 9 Piece 5 Other(specify) 10	a [] b [] c [] d [] e [] f [] g [] h []	

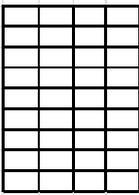
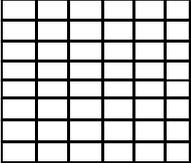
1.39	During the last month, how many units of [ITEM] did you use? <i>Mwai muthelu munatumie kithimi kiana ata kya kindu kii?</i> FOR LPG (GAS), USE 1 DECIMAL AS NEEDED	NUMBER	a	b	c	d	e	f	g	h
	3 KG cylinder		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	6 KG cylinder		<input type="checkbox"/>							
	12.5 KG cylinder		<input type="checkbox"/>							
	13 KG cylinder		<input type="checkbox"/>							
	15 KG cylinder		<input type="checkbox"/>							
	Other (specify)		<input type="checkbox"/>							
	LITRES for f (kerosene/parafin) WATTS for h (electricity)									
1.40	What was the total cost of these units that you used during the last month? <i>Mwatumie mbesa siana ata kuthooa (ITEM) mwei usu muthelu?</i>	KSH	a	b	c	d	e	f	g	h
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.41	Where is the nearest source for this [ITEM]? <i>Vala vakuvi mutonya ukwata syindu ii ni va?</i> CODES	SOURCE	a	b	c	d	e	f	g	h
	1. Kitonyoni		<input type="checkbox"/>							
	2. Mwanja		<input type="checkbox"/>							
	3. Kitise		<input type="checkbox"/>							
	4. Kathonzweni		<input type="checkbox"/>							
	5. Kwa Kavisi		<input type="checkbox"/>							
	6. Maueli		<input type="checkbox"/>							
	7. Wote		<input type="checkbox"/>							
	8. Machakos		<input type="checkbox"/>							
	9. Other		<input type="checkbox"/>							
1.42	How long would one take (walking one-way) to the nearest source to get item? WRITE DISTANCE TRAVELLED TO GET [ITEM] IN MINUTES? <i>Mundu atonya ukua ivinda yiana ata (matakika) kuthi vau mukwataa syindu isu kuthi kwoka?</i>	MINUTES	a	b	c	d	e	f	g	h
			<input type="checkbox"/>							
1.43	How many minutes per week was used to get [ITEM] by members of your household? <i>Ni ndakika siana ata kwa kyumwa sinatumie kuthi kuthooa syindu isu ni andu ma musyi vaa kwenyu?</i>	MINUTES	a	b	c	d	e	f	g	h
	Men		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Women		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Children		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.44	Where is cooking usually done? <i>Muw/iaa va?</i>									
		In a room used for living or sleeping								1
		In a separate room used as kitchen								2
		In a separate building used as kitchen								3
		Outdoors								4
		Other								6
		(Specify)								

1.45	Please show me where members of your household often wash their hands <i>Nutonya umbonia vala andu vaa musyi kwenyu mathambaa moko?</i>	OBSERVED	1
		NOT OBSERVED, NOT IN DWELLING/ YARD/PLOT	2
		NOT OBSERVED, NO PERMISSION TO SEE	3
		NOT OBSERVED, OTHER REASON	4
			1.48
1.46	OBSERVATION ONLY: OBSERVE PRESENCE OF WATER AT THE PLACE FOR HANDWASHING	Water is available	1
		Water is not available	2
1.47	OBSERVATION ONLY: OBSERVE PRESENCE OF SOAP, DETERGENT OR OTHER CLEANSING AGENT	Soap or detergent (Bar, liquid, powder, paste)	1
		Ash, mud, sand	2
		None	3
1.48	MAIN MATERIAL OF THE FLOOR RECORD OBSERVATION.	Natural floor	
		Earth/sand	1
		Dung	2
		Rudimentary floor	
		Wood planks	3
		Palm/bamboo	4
		Finished floor	
		Parquet or polished wood	5
		Vinyl or asphalt stripes	6
		Ceramic tiles	7
		Cement	8
		Carpet	9
		Other	98
		(Specify)	

1.49	MAIN MATERIAL OF THE ROOF	Natural roofing		
	RECORD OBSERVATION.	No roof	1	
		Thatch/palm leaf	2	
		Sod	3	
		Rudimentary roofing		
		Rustic mat	4	
		Palm/bamboo	5	
		Wood planks	6	
		Cardboard	7	
		Finished roofing		
		Metal/iron sheets	8	
		Wood	9	
		Calamine/cement fiber	10	
		Ceramic tiles	11	
		Cement	12	
		Roofing shingles	13	
		Other	98	
		(Specify)		
1.50	MAIN MATERIAL OF THE EXTERIOR WALLS	Natural walls		
	RECORD OBSERVATION.	No walls	1	
		Cane/palm/trunks	2	
		Dirt	3	
		Rudimentary walls		
		Bamboo/sticks with mud	4	
		Stone with mud	5	
		Uncovered adobe	6	
		Plywood	7	
		Cardboard	8	
		Reused wood	9	
		Finished walls		
		Cement	10	
		Stone with lime/cement	11	
		Bricks	12	
		Cement blocks	13	
		Covered adobe	14	
		Wood planks/shingles	15	
		Other	98	
		(Specify)		

1.51	How many rooms in the household are used for sleeping? <i>Ni lumu siana itumiawa kwa kukoma vaa musyi?</i>	ROOMS <input type="text"/>		
1.52	Does your household own any mosquito nets that can be used to protect against mosquitoes while sleeping? <i>Vaa kenyu musyi ve neti sya umuu itumiawa kwisiia kuumwa ni umuu yila mukomete?</i>	Yes	1	
		No	2	
		Don't know	8	
1.53	Does the HH own a title deed for the land on which your house is built? <i>Musyi uu wina title deed ya kitheka kii mwakite?</i>	Yes	1	
		No	2	2.0
1.54	In whose name is the house title deed <i>Title isu yandikithitwe isyitwa yau?</i>	Head of the HH	1	
		Spouse to the HH head	2	
		Son to HH head	3	
		Daughter to HH head	4	
		Brother to HH head	5	
		Sister to HH head	7	
		Father to HH Head	8	
		Other	98	
		(Specify)		

Now, I would like to ask you questions regarding ownership of agricultural land and the crops grown on the land		Yu, nienda ukukulya makulyo makonetye kumesya kitheka kya nima namimea ila ivandawa vo							
2.10	Does any member of this household own any agricultural land? <i>Ve mundu musyi uu vi kitheka kyake kya kuima?</i>	Yes No	1 2 → 2.22						
2.11	Does the household own a title deed for this land? <i>Musyi usu wi title deed ya kitheka kiu?</i>	Yes No	1 2						
2.12	What is the land ownership structure for land owned by this HH? <i>Kitheka kiu kimeetwe ni andu musyi uu kwa nzia yiva?</i>	Rented Leased Free Family Free Comunal Other (specify)	Y N 1 2 1 2 1 2 1 2 1 2						
2.13	How many hectares of agricultural land (total) do members of this household own? <i>Ni eka siana ata syonthe sya andu ma musyi uu?</i>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> hectares							
2.14	If all the land was to be sold today, how much money (Kshs) would it fetch ? <i>Kitheka kyu kyonthe kikatwa kitoriya kuma mbesa (KShs) siana?</i>	KSH <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>							
2.15	What crops does the household grow? <i>Ni mimea ya muthemba mwau ila muvanda?</i> INSERT CODE OF THE CROP	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
2.16	Do you sell some of the crops you grow? <i>Ni muthoosya mimea imwe ila mukethaa?</i>	Yes No	1 2 → 2.20						
2.17	Which crops do you sell? <i>Ni mimea yiva ila muthoosya?</i>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							
2.19	Annually, how much income is generated from the sale of these crops annually? <i>Ni mbesa siana syumanaa na uhoosya wa mimea isu kila mwaka?</i>	KSH <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>							
CODES FOR 2.15 AND 2.17									
Maize	1	Rice	7	Onions	13	Mangoes	19	Cotton	25
Beans	2	Cowpeas leaves	8	Carrots	14	Water melon	20	Coffee	26
Millet	3	Avocadoes	9	Cabbages	15	Green grams	21	Trees	27
Sorghum	4	Arrow roots	10	Sukumawiki	16	Bananas	22	Other crops	98
Peas	5	Cassava	11	Tomatoes	17	Oranges	23	(Specify)	
Pawpaws	6	Sweet potatoes	12	Groundnuts	18	Nappier grass	24		
2.20	Do you irrigate your own land? <i>Ni munyithasya muunda wenyu?</i>	Yes No	1 2 → 2.22						

2.21	How do you irrigate your own land? <i>Munyithasya muunda wenyu ata?</i>	Using water from a borehole/well Using a hand pump Using a motorised pump With water drawn using a bucket from borehole/well Using a gravity pipeline Using water fetched from a river Using water from a diverted stream Other (Specify)	Y N 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2
Now I would like to ask you some questions regarding ownership of livestock, their usage and value <i>Yu, nienda ukukulya makulyo makoneteye kumesya indo, mitumile na thooa wasyo</i>			
2.22	Does this household own any livestock and poultry? <i>Vaa musyi kwenyu mui indo kana nguku?</i>	Yes No	1 2 → 2.27
2.23	How many of the following livestock/poultry does this household own? <i>Musyi uu wi nguku/indo siana?</i>	NUMBER Milk cows? Bulls? Calves? Horses, donkeys or mules? Goats? Sheep? Chickens? Rabbits? Bee-hives?	
2.24	Do you use livestock for domestic consumption? <i>Nimuthinzaa indo mukaya nyama?</i>	Yes No	1 2
2.25	Do you sell your livestock? <i>Nimuthocasya indo syenu?</i>	Yes No	1 2 → 2.27
2.26	How much money (KShs) would you receive for the sale of all these... <i>Ni mbesa siana utonya kwosa kwa kuthoosya syonthe sya...</i>	KSH Milk cows, bulls or calves? <i>Moi kana nzau?</i> Horses, donkeys or mules? <i>Mbalasi, mang'oi kana nyumbu?</i> Goats? <i>Mbui?</i> Sheep? <i>Malondu?</i> Chickens? <i>Nguku?</i> Rabbits? Honey from one bee-hive?	
Now I would like to ask you questions regarding ownership of a bank account and engagement in savings activities <i>Yu, nienda ukukulya makulyo makoneteye kumesya akaundi ya vengi na kwithiwa wiite mbesa</i>			
2.27	Does any member of this household belong to a chama? <i>Ve mundu wa musyi uu wenyu wi nthini wa kyama kya mbesa?</i>	Yes No	1 2

2.28	Does any member of this household own a bank account? <i>Ve mundu wa musyi uu wenyu wi akaundi ya vengi?</i>	Yes No Don't know	1 2 8
2.29	Does any member of this household belong to another savings group? <i>Ve mundu wa musyi uu wenyu wi kikundini kya kwia mbesa?</i>	Yes No	1 2 → 3.0
2.30	Specify name and type of saving group that household member belongs to? <i>Andu asu me kukikundini kiva?</i>	Specify name _____ Specify type _____	
2.31	What are the conditions required for joining saving group <i>Ni maundu mau mendekaa ni kana mundu eyiunge na kikundi kya kwia mbesa?</i>	You have to own title deed of land where your house is built You have to own title deed of agricultural land You have to own livestock You have to have a bank account You need to be related to the village elder You need to be older than 18 years You need to be younger than 50 years You need to be married You need to be male/female You need to have good reputation in the village Other reason (specify)	Y N 1 2 1 2

3.0 COMMUNAL ASSETS			
Now I am going to ask you some questions regarding communal/community assets Yu, nienda ukukulya makulyo makonetye syindu ila ikwaniwe/itumianiwa ni andu vaa utuini kwenyu?			
3.1	Does your village have communal assets? Utui uu wenyu wi syindu ikwaniwe/itumianiwa ni andu onthe?	Yes No	1 2 → 4.0
3.2	What communal assets does your village have? Ni syindu myau ikwaniwe/itumianiwa ni andu ma utui uu wenyu mwi nasyo?	a Dam(Silanga) b River c Community Centre d School e Health Clinic f Forest g Common farmland h Garden i Borehole/well j Stored Water k Cattle dip l Church m Other	Y N 1 2 1 2
3.3	Do you have ease of access to these communal assets? Ni withiawa na ulaisi wa kuvikia syindu isu ikwaniwe/itumianiwa? 1=yes 2=No	a b c d e f g h i j k l	FOR THOSE WITH 'YES' RESPONSE, SKIP TO 3.5
FW: ASK ONLY OF ASSET WITH RESPONSE 2 ABOVE			
3.4	What is the main obstacle in accessing each of these communal assets? Ni kisii kyau kinene kila kitumaa mutavikia (syindu) ikwaniwe/itumianiwa?	1 Long distance from house 2 Restricted access 3 Hilly location 4 Payment needed to gain access 5 Other	a b c d e f g h i j k l
3.5	Do you have ease of social access to the communal assets? Ni withiawa na mwanya wa kiimikalie wa kutumia syindu isu ikwaniwe/itumianiwa? 1=Yes 2=No	a b c d e f g h i j k l	FOR THOSE WITH 'YES' RESPONSE, SKIP TO 3.7
FW: ASK ONLY OF ANY ASSET WITH RESPONSE 2 ABOVE			
3.6	What is the main obstacle in accessing each of these assets? Ni kisii kyau kinene kitumaa mutavikia kimwe kya ii?	1 Age limit 2 Gender 3 Income 4 Occupation 5 Other (Specify)	a b c d e f g h i j k l

3.7	Now I would like to read you some statements regarding the communal assets. Please tell me how much you agree or disagree with the following statements. The responses are 'Strongly Agree', 'Agree', 'Disagree', and 'Strongly Disagree' Yu nienda kuusomea maundu maandikitwe makonetye syindu isu ikwaniwe/itumianiwa. Kwangelesya undu ukwitikila kana kuleana na asu maandikitwe. Mosungio as ni 'nuitikila muno, nuitikila, nduitikila, nduitikila ona vanini	SA A NAD D SD
1.	If you use communal resources/assets the expectation is that you contribute to village/community leadership Watumia syindu ii ikwaniwe/itumianiwa wkwatiwa kunengane kindu kwa utongoi wa ndua	1 2 3 4 5
2.	If you use communal resources/assets the expectation is that you pay money Watumia syindu ii ikwaniwe/itumianiwa wkwatiwa kana ukaiva mbesa.	1 2 3 4 5
3.	If you use communal resources/assets the expectation is that you contribute time for village/community activities Watumia syindu ii ikwaniwe/itumianiwa wkwatiwa kumia masaa maku kwa kwika maundu ma ndua.	1 2 3 4 5

4.0 INCOME, EXPENDITURE AND ENTERPRISE						
Now I am going to ask you some questions regarding the income, expenditure and enterprises for this HH Yu, nienda ukukulya makulyo makonetye ukwati wa mbesa, mitumiile vaa musyi kwenyu						
4.1 Now, thinking about all HH members who contributed an income to this family in the last one month please, give me the names of these family members, the monthly income that they contributed last month and the number of days they worked in the month to earn this income: Yu, uisuarua yiulu va andu ma musyi wenyu ala maumisisye mbesa kwoundu wa musyi wenyu mwai umwe muthelu, kwandavye masitwa ma andu asu ma musyi, mbesa manamsisye mwai usu unavitie na mithenya ila mathukumie mwaini usu nikana akwate mbesa ii: IF THERE IS NO INCOME, SKIP TO 4.2						
	HH MEMBER ID CODE	Occupation	Monthly contribution to HH in Kshs (Last month)	Estimation of other contribution to HH (in kind)	Total contribution at HH	Total no. of days worked
1						
2						
3						
4						
5						
6						
TOTAL						
What is the month of year when income is highest? Ni mwai wva wa mwaka ula ukwati wa kii-mbesa withiawa mwingi vyu?			Month	Income Kshs	Income Kshs	
What is the month of year when income is lowest? Ni mwai wva wa mwaka ula ukwati wa kii-mbesa withiawa munini vyu?						

4.2	What was the HH expenditure in the last 1 month ? <i>Munatumii mbesa siana ata vaa kwenyu mwai umwe muthelu? Mbese ila munatumii?</i>	Monthly expenditure Kshs? Ksh. _____	
		<i>Check if income>expenditure</i> If income>expenditure then how much did the HH save last month? Ksh. _____ <i>Ethiwa ukwati ni mwingi mbee wa mitumiile ni mbesa siana munatie mwai usu unathelle?</i>	
		If income<expenditure then how much debt did HH incur last month? Ksh. _____ <i>Ethiwa ukwati ni munini kwa mitumiile ya mbesa, mwina ikoani mwei usu muthelu?</i>	
4.3	Does HH have it's own enterprise/business? <i>Musyi uu wenyu wi utandithya/viasala?</i>	Yes 1 No 2 → 4.8	
4.4	What is the type of enterprise/business? <i>Ni utandithya/viasala mwau?</i>	Specify type _____	
4.5	What was the main source of capital for starting the enterprise? <i>Mbese sya kwambiiya utandithya usu muno muno mwaumisye va?</i>	Loan from family/friends 1 Gift from family/friends 2 Sale of assets owned 3 Proceeds from another business 4 Own savings 5 Loan from SACCO 6 Loan from a bank/other financial institution 7 Loan from money lender 8 Inheritance 9 Other (Specify) 96	
4.6	Is the revenue from the business enough to cover operation and maintenance costs of the enterprise? <i>Mbese ila mukwataa kumana na utandithya usu ni mbianu kwa kwianisya mavata ma kiimbese ma utandithay usu?</i>	Yes 1 → 4.8 No 2	
4.7	What is the main source for covering operation and maintenance costs? <i>Ni va mumasya mbese sya kwianisya mavata ma kii-mbese ma utandithya usu?</i>	GET CODES FROM 4.5 <input type="text"/>	
4.8	Does the household receive income from family members in another HH or in big towns like Nairobi or any other town? <i>Musyi uu wenyu nukwataa mbese kuma kwa andu angu menyu mathukumaa taoni ta Nairobi na o taoni ingi/nthi sya nza?</i>	Yes 1 No 2 → 4.11	
4.9	How much income (in total) did the HH get from family members in the last month? <i>Ni mbese siana (syonthe) andu ma musyi uu wenyu matumaa kwa mwai?</i>	KSH <input type="text"/>	

4.10	What means is used to send/receive this money? <i>Ni nzia yiva mutumiaa kutuma/kutumiwa mbese?</i>	Hand delivery 1 2 8 Bank transfer 1 2 8 M-pesa 1 2 8 Zap 1 2 8 Yu cash 1 2 8 Orange money 1 2 8 Western Union 1 2 8 Moneygram 1 2 8 Other (Specify) _____ 1 2 8	Y N DK
4.11	Has the HH experienced any of these shocks in the last 3 years? <i>Andu ma musyi wenyu nimethwa maakomana na imwe sya maundu aa myaka itatu mithelu?</i>	1 Drought <i>Munyao/yua</i> 1 2 8 2 Floods <i>mbua mbanangi</i> 1 2 8 3 Crop disease or crop pests <i>mowau kana tusamu twa mimea</i> 1 2 8 4 Livestock death/theft <i>Kukwa/ung'ei wa indo</i> 1 2 8 5 HH business failure <i>Kuvaluka kwa viasala ya musyi</i> 1 2 8 6 Loss of salaried employment <i>Kukosa via wa musaala</i> 1 2 8 7 Non-payment of salary <i>Kulea kuiwa musaala</i> 1 2 8 8 End of regular assistance, aid, or remittances 1 2 8 <i>Kutilika kwa vala mbese kana utethyo umaa</i> 9 Large rise in price of food <i>Kuvanda kwa thooa wa maliu</i> 1 2 8 10 Large rise in agricultural input prices 1 2 8 <i>Kuvanda kwa mathooa ma syindu sya uimi</i> 11 Went elsewhere to find work for more income 1 2 8 <i>Kuthi vandu vangi kumantha via kwoondu wa ukwati mwingi</i> 12 Chronic/severe illness or accident of HH member 1 2 8 <i>Uwau utavoaa/uwau munene kana mbanga kwa mundu wa musyi</i> 13 Birth in the HH <i>Isyawa ya kana vaa musyi</i> 1 2 8 14 Death of HH head <i>Kwitwa kwa ndongoi ya musyi</i> 1 2 8 15 Death of working member of household 1 2 8 <i>Kwitwa kwa mundu wa musyi unathukumaa</i> 16 Death of other family member <i>Kwitwa kwa mundu o ungi wa musyi</i> 1 2 8 17 Break-up of the HH <i>Kutaanisia kwa musyi</i> 1 2 8 18 Incarceration/getting jailed <i>Kwikwa yela</i> 1 2 8 19 Fire <i>Mwaki</i> 1 2 8 20 Robbery <i>Ungai</i> 1 2 8 21 House damaged <i>Kwanangika nyumba</i> 1 2 8 22 HIV/AIDS <i>Muthelo</i> 1 2 8 23 Fight with neighbour <i>Kau na mutui</i> 1 2 8 24 Alcohol <i>Unyw</i> 1 2 8 98 Other <i>Ingi</i> 1 2 8	Y N DK

4.12	What is the estimated value of loss in Kshs due to all the shocks that the HH has experienced? <i>Ni ta mbesa siana sinaae kumana na mauito asu manakitikie musyi uu?</i>	KSH <input type="text"/>	
4.13	How much has the household spent in the last three years for following <i>Ni mbesa siana musyi wenyu utumite kwoundu wa syindu ii:</i>	KSH Wedding Mutwaano Funeral <i>Mathiko</i> Medical expenses for family <i>Mbesa sya kuiithia</i> Medical expenses for friends <i>Mbesa sya kuiva mbilu sya anyanyau</i>	<input type="text"/>
ASPIRATION AND RISK-TAKING			
Now I am going to ask you questions about your future aspirations regarding income-earning/livelihood <i>Yu niukulya makulyo yiulu wa mivango yaku ya mithenya yukite ya mikwatile ya kii-mbesa na mikalile</i>			
4.14	Looking to the next three years, what do you anticipate your HH income to be? <i>Wasisya myaka itatu yukite wiikwata musyi wenyu utonya kwithiwa na ukwati wa kii-mbesa wiana ata?</i>	Lower than current income Same as current income Double than current income More than double of current income	1 2 3 4
4.15	Now I am going to read you some statements regarding the actions that you are willing to take over the next three years in order to improve your personal income. Please tell me whether you agree or disagree with the statements. <i>Yu niusomea mithia ikonetye maundu ala utwite kwika vandu va myaka itatu yukite ni kenda usevuye mikwakitile yaku ya mbesa. Kwandavye kana nuitikila kana nduitikilana na maundu aa:</i>		Y N
	1. You are willing to endanger your health <i>Nukuumisya mwii waku</i>		1 2
	2. You are willing to leave your family for sometime <i>Ni wiyumitye kutia musyi waku k wa ivinda</i>		1 2
	3. You are willing to move around the country a lot <i>Ni wiyumitye kutemba vaa kenya muno</i>		1 2
	4. You are willing to leave your community <i>Ni wiyumitye kutia andu ma utui wenyu</i>		1 2
	5. You are willing to leave your friends <i>Ni wiyumitye kutia anyanyau maku</i>		1 2
	6. You will give up leisure time <i>Nukuiekana na ivinda yaku ya kuthumua</i>		1 2
	7. You will keep quiet about political views <i>Nuukililya mawoni maku ma kisiasa</i>		1 2
	8. You are willing to learn a new routine <i>Niwiymitye kusoma maundu meu</i>		1 2
	9. You are going to work harder than you are now <i>Nuuthukuma muno mbeange va undu uuthukuma oyu</i>		1 2
	10. You are going to take on more responsibility <i>Nukwosa mawia maingi</i>		1 2

5.0 Now, I would like to ask you on your opinion regarding your HH's standard of living						
<i>Yu nienda ukukulya woni waku iulu wa kiwango kya mwikalile wa musyi waku.</i>						
5.1 a. Over the last week, how many meals has your HH eaten per day, on average? <input type="text"/>						
<i>Vandu va kyumwa kithelu, vaa musyi muisaa liu keana kwa muthenya?</i>						
1	2	3	4	5	6	7
Concerning your household's food consumption over the past one month, which of the following is true?	Concerning your housing, which of the following is true?	Concerning your household's clothing, which of the following is true?	Concerning the standard of health care you receive for household members, which of the following is true?	Which of the following is true? of your current income/livelihood... READ Allows you to build your savings Allows you to save just a little Only just meets your expenses Is not sufficient, so you need to use your savings to meet expenses Is really not sufficient, so you need to borrow to meet expenses	In terms of your household economic wellbeing, are you better off, the same as, or worse off than this same time a year ago	In terms of your household economic wellbeing, in a year from now do you expect to be better off, the same as, or worse off than now?
It was less than adequate for household needs		1			MUCH BETTER 1	MUCH BETTER 1
It was just adequate for household needs		2			BETTER 2	BETTER 2
It was more than adequate for household needs		3			NO CHANGE 3	NO CHANGE 3
(NOTE THAT 'ADEQUATE' MEANS NO MORE OR NO LESS THAN WHAT THE RESPONDENT CONSIDERS TO BE THE MINIMUM CONSUMPTION NEEDS OF THE HOUSEHOLD.)					WORSE OFF 4	WORSE OFF 4
					MUCH WORSE 5	MUCH WORSE 5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2 How satisfied are you with your current financial situation?						
<i>Wiiva wianive ata ki mbesa saani uu?</i>						
FULLY SATISFIED	1		NOT AT ALL SATISFIED	4		<input type="text"/>
<i>Mwianie Vyu</i>			<i>Utemwianie ona vanini</i>			
RATHER SATISFIED	2		DONT KNOW	5		<input type="text"/>
<i>O mwianie</i>			<i>Ndyisi</i>			
LESS THAN SATISFIED	3		REFUSE TO ANSWER	6		<input type="text"/>
<i>Utemwianie muno</i>			<i>Alea kusungia</i>			
5.3 Do you feel that your financial situation in the past three years has						
<i>Nukwona kana maundu ma mbesa maku kwa myaka itatu mithelu niyithitwe yi....</i>						
IMPROVED A LOT	1		SOMEWHAT DETERIORATED..	4	REFUSE TO ANSWER	7
<i>Iseuvite muno</i>			<i>Nithukute ovanini</i>		<i>Alea kusungia</i>	
SOMEWHAT IMPROVED	2		DETERIORATED A LOT	5		<input type="text"/>
<i>Iseuvite ovanini</i>			<i>Nithukite muno</i>			
REMAINED THE SAME	3		DONT KNOW	6		<input type="text"/>
<i>Nyaavinduka</i>			<i>Ndyisi</i>			
5.4 Do you think that in the next 12 months, your financial situation will be....						
<i>Nusilya myei 12 yukite, ukwati waku ukeethiwa....</i>						
IMPROVED A LOT	1		SOMEWHAT DETERIORATED..	4	REFUSE TO ANSWER	7
<i>Museo muno</i>			<i>Wimuthuku</i>		<i>Alea kusungia</i>	
SOMEWHAT IMPROVED	2		DETERIORATED A LOT	5		<input type="text"/>
<i>Museo ovanini</i>			<i>Wimuthuku muno</i>			
REMAINED THE SAME	3		DONT KNOW	6		<input type="text"/>
<i>Undu umwe</i>			<i>Ndyisi</i>			
5.5 How concerned are you about being able to provide yourself and your family with food and basic necessities in the next 12 months?						
<i>Uusikite ate kwa kwanyisa mavata maku na ma musyi waku ma liu na maundu ala ma vata kwa myei 12 yukite?</i>						
VERY CONCERNED Niusikite muno	1		NOT CONCERNED AT ALL ..Ndiusuk	4		<input type="text"/>
A LITTLE CONCERNED Niusikite ...	2		DONT KNOW ndyisi.....	5		
NOT TOO CONCERNED Niusikite vai	3		REFUSE TO ANSWER Alea usungia	6		<input type="text"/>

5.16 Now I would like to ask you about the overall state of well being in your household. Please indicate how much you agree or disagree with the following statements. The responses are 'Strongly Agree', 'Agree', 'Disagree' and 'Strongly Agree'					
Yu nienda ukukulya iulu wa uima wa mwii wa andu ma musyi uu waku. Vatonyeka ndavye kana nuitiila, nuitikila muno kana nduitikila , kana nduitikila ona vanini.					
	SA	A	NAD	D	SD
1. You are a respectable member of this community <i>Wi munenge ndaia vaa utuini uu</i>	1	2	3	4	5
2. Your family is able to afford most basic needs <i>Musyi waku nutonya kwiyoungamia mavata ala ma lasima</i>	1	2	3	4	5
3. You are able to comfortably take care of your family <i>Nutonya kusuvia nyumba yaku vate thina ona wiva</i>	1	2	3	4	5
4. Your family is able to afford health care and other emergencies <i>Musyi waku nutonya kwiyoungamia mavata ma uima wa mwii na mbanga ingi.....</i>	1	2	3	4	5
5. Your family is able to afford enough fuel needed for lighting <i>Musyi waku nutonya kwiyoungamia kwakania taa</i>	1	2	3	4	5
6. Your family is able to afford enough fuel needed for cooking <i>Musyi waku nutonya kwiyoungamia mwaki wa kuuu</i>	1	2	3	4	5
7. Your family eats a balanced diet always <i>Musyi waku nutonya kuya liu ula waile</i>	1	2	3	4	5
8. Your family can afford to hire extra labour when in need eg househelps <i>Musyi waku nutonya kwiyoungamia kuiva andu ma ivalua/kutethesaya nyumba</i>	1	2	3	4	5
9. You are always able to afford new uniform for your children <i>Nutonya kuungamia kuthooa univomu ya syana syaku</i>	1	2	3	4	5
10. You are able to comfortably pay for your children's schooling <i>Nutonya kuiva syana syaku ila syi sukulu viisi vate thina</i>	1	2	3	4	5
11. You have enough clothes to change everyday <i>Wina ngua syanite sya kuvindua kila muthenya</i>	1	2	3	4	5
Now I would like to ask you some questions regarding your perception of development in this community					
Yu nienda ukukulya mokulyo makoneteye mawoni iulu wa maendeeo nduani ino					
5.17 What is development? <i>Meendeeo ni kyau?</i>					
CIRCLE ALL THAT ARE MENTIONED					
					1
					2
					3
					4
					5
					6
					7
					8
					9
					10
					11
					12
					13
					14

Appendix 10: Papers drafted from this study and either published or submitted to peer-referred journals

1. Essendi H, Madise N & Matthews Z 2014. Perceptions of development by residents of a rural community in Kenya: A capability issue. *Journal of African Studies and Development*, 6, 67-77. Available online at: http://academicjournals.org/article/article1407239330_Essendi.pdf
2. Factors influencing perception of development in rural Kenya: Structural Equation Modeling approach. Paper submitted to *Development in Practice* journal
3. Do positive perceptions of development influence fertility choices? Evidence from rural Kenya. Paper undergoing a second review in *PLOS ONE*

10.1: Perceptions of development by residents of a rural community in Kenya: a capability issue

academicJournals

Vol. 6(4), pp. 67-77, May 2014
DOI: 10.5897/JASD2014.0281
ISSN 2141 -2189
Copyright © 2014
Author(s) retain the copyright of this article
<http://www.academicjournals.org/JASD>

Journal of African Studies and
Development

Full Length Research Paper

Perceptions of development by residents of a rural community in Kenya: A capability issue

Hildah Essendi, Nyovani Madise and Zoe Matthews

Social Sciences, Faculty of Social and Human Sciences, University of Southampton.
Southampton SO17 1BJ United Kingdom.

Received 25 March 2013; Accepted 7 May, 2014

Despite the acknowledgment that participatory approaches in development have potential in understanding and designing development programmes and policies, perceptions of development continue to be dominated by outsiders including professionals and other development agents, most of who do not experience the conditions. Using qualitative data collected from residents of Makueni County of Eastern Kenya, this paper attempts to involve Makueni community members in the conceptualization of development in their context and outlining possible strategies to address the identified development issues. The study finds a community keen on participating in development and who are able to rank their development needs and priorities, emphasizing the importance of water in driving development, as well as the perceived hierarchical nature of development. The study recommends the use of both macro and micro approaches to development where development recipients are involved in development plans and decisions.

Key words: Development; perceptions; participatory development; Kenya; sub-Saharan Africa.

INTRODUCTION

Although the key factors singled out in neo-classical approaches as being key in development are the standard of living and income, in recent development studies, it has become increasingly important to recognise also the importance of non-monetary factors, particularly in understanding the dynamics of socio-economic development (Sen 2010; Ledwith 1997; Sen 1999; Szirmai 2005; Laderchi, Saith, and Stewart 2003). These measures include viewing income as a means to development and reduction of poverty rather than the end

by itself. In addition, the multidimensional nature of poverty has necessitated a proposition of various measurement approaches, including using both qualitative and quantitative measures that go beyond the conventional measures of using income and expenditure (KIPPRA 2004; Alkire et al., 2013; UNDP 2010a; McKinley 1997; Laderchi, Saith, and Stewart 2003; Laderchi 1997). Based on these approaches, one key aspect in the efforts to advance development is the involvement of other development actors in development

E-mail: hildah.essendi@gmail.com Tel +44 23 80594748

Author agree that this article remain permanently open access under the terms of the Creative Commons Attribution License 4.0 International License

efforts, most notably the beneficiaries of development efforts, an approach that is however still rarely applied. Participation in development, which entails enlarging the capacity of the socially and economically marginalized individuals and involving them in decision making over their own lives is rarely sought, especially in development efforts implemented in developing countries (Gujt and Shah 1998; Chambers 2005; Sen 1999). Yet, it has been advanced as an approach that holds great potential in ensuring faster and more sustainable outcomes as it helps understand communities' felt needs thereby helping prioritise them in development initiatives (Chambers 1983, 2005). There is therefore a need to revisit such approaches, since many communities in developing countries, especially those in the rural areas, continue to experience poverty, stagnated development and poor wellbeing outcomes (Fotso 2006; Sahn and Sahn 2004; Smith, Ruel, and Ndiaye 2004).

This approach is important in the sub-Saharan region where many of the countries face poor wellbeing and development progress. The rural areas of the region fare even worse. For instance, although sub-Saharan Africa nearly doubled the number of people using an improved drinking water source, from 252 million in 1990 to 492 million in 2008, this progress was greater in urban areas, compared to the rural areas of the region. (United Nations 2011). Consequently, an urban dweller in sub-Saharan Africa is 1.8 times more likely to have access to an improved water source than a counterpart in the rural area (United Nations 2011). The improvements, favouring the urban areas, have also been reported in other areas of wellbeing. Reports of child malnutrition indicate that the rural population is worst affected, with children in rural areas of developing regions being twice as likely to be underweight as their urban counterparts (United Nations 2011). In comparison to the urban and the non-poor, less progress in sanitation has been registered among the poor and those in the rural areas (World Bank 2010). Food shortages are also a major problem during years of drought, and nutritional intake in rural areas of sub-Saharan Africa is consistently poor (Maxwell 2001).

In Kenya, there are high poverty levels and unequal development between regions and between rural and urban areas (IFAD 2010; Muhula 2009; Alwy and Schech 2007; World Bank 2009). Yet, despite the distinct gap between the 'rich' and the 'poor' regions, as well as between rural and urban areas (IFAD 2010; Muhula 2009; Alwy and Schech 2007; World Bank 2009), very few of the development initiatives implemented incorporate participatory approaches where the views of community members are sought in order to prioritise their needs. At the same time, in cases when this approach has been used, this has either been incomplete or has been applied at a macro level, disregarding the resource and

cultural variations between the regions of the country. Consequently, development inequalities can be observed not just between regions, but also within regions and between the rural and urban areas of the country. Makueni district, for instance, is reported to be one of the poorest in Eastern province and in the country (73.5% of households are poor) (NCAPD 2005). The district is also reported as making the highest contribution to the national poverty level (5.1%) compared to other districts in Eastern province where it lies, at: Nithi (4.5%), Kitui Central (4.4%), Mbooni (4.2%), Kangundo (4.2%), Kibwezi (4%), Igembe (3.9%), Mwingi North (3.9%), Mwala (3.7%), and Machakos Town (3.6%). These dynamics support the need to consider context when planning and implementing development projects.

This paper seeks to answer these three questions; How do residents of Makueni County understand 'development'? What are the various aspects of development that are perceived to be important to Makueni residents? What aspects of development/wellbeing are viewed at individual/ household, community and national levels? To do this, the paper employs the United Nations' definition of 'development' as a process of enlarging people's choices with the most critical choices entailing a long and healthy life, acquiring knowledge and enjoying a decent standard of living, outlining political freedom, guarantee of human rights and self-respect as other important choices in development (UNDP 2010b). The approach of 'development' used in this paper incorporates its multi-faceted nature that encompasses economic, social, political, cultural and environmental factors as defined and used in other studies in the country (Republic of Kenya 1979; Bahemuka et al. 1998). The study uses 'participation' or 'participatory development' defined as a methodology where the capacity of the socially and economically marginalised is enlarged and their involvement in decision making over their own lives is sought (Gujt and Shah 1998; Chambers 2005; Sen 1999). The study is based upon the concept of community proposed by MacQueen et al (2001) as a result of the study among respondents in the US where it was referred to as

"...a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings" (MacQueen et al. 2001).

MATERIALS AND METHODS

Study area and population

The study was conducted in Kitonyoni and Mwanja sub locations of Kathonzweni district in Makueni County, Eastern Kenya. Following

the enactment of a new constitution in 2010, the Kenyan government implemented a devolved system of governance which came into effect in March, 2013. Makueni which was a district at the time of study is now a County. The study sites therefore now fall in Kathonzwani district which is within Makueni County. There are instances in this paper where this area is referred to as a district especially in regards to statistical presentations. Kitonyoni sub location is an area covering 27.1 sq km with a total population of 2,500, which is comprised of 1,284 males and 1,306 females, while Mwanja is 62.9 sq km with a total population of 3,239, which is comprised of 1,569 males and 1,670 females.

Makueni area is inhabited by the Akamba-speaking Bantus who form about 97% of the population of the County with the remaining 3% comprising people from other communities, who live mainly in the town areas of the County (Republic of Kenya 2009). The two study sub-locations like most of Makueni are semi-arid in nature receiving just with minimal rainfall between November and December during which the people grow maize, beans, green grams, chickpeas, cowpeas and pigeon peas for subsistence. Other than this subsistence agriculture, the other main economic activities in the sub-locations include beekeeping, small scale trade and subsistence goat farming (Oxfam 2008). The minimal rainfall received in the area causes acute food insecurity especially during the long dry spells, thereby leading to high dependency of a large proportion of the population on government or donor food aid (GOK 2008).

Although traditionally relying on farming as a means of livelihood, the Akamba people are now shifting from farming and are incorporating other means of livelihood, in particular migrant labour to the towns and cities as a result of increased poverty in the County (Nzioka 2000). Like many other indigenous African communities, the Akamba people consider a family unit as a very important entity in their lives, because it is the basic unit of production, consumption, investment and insurance (Tiffen et al., 1994). 99% of household in Kitonyoni use water from streams, springs, wells or boreholes while in Mwanja, 99% use water from streams (Republic of Kenya 2011b). Regarding energy, only 13.1% of households in the district use electricity with 81.2% using paraffin for lighting (Republic of Kenya 2011a). Health outcomes are also poor, whereby Eastern province where Makueni County is located had the highest percentage of stunted children, at 41.9% (KNBS and ICF Macro 2010).

Data collection and analysis

This paper uses qualitative data collected in 2012 using focus group discussions (FGDs) and key informant interviews (KIIs) to understand the community's perceptions of development. Ethical approval of the study was obtained from the University's School of Social Sciences Ethics Committee and from the Kenya National Council for Science and Technology (NCST). Informed consent was obtained from participants before the discussions were held. A total of 36 groups of men and women and two community leaders were interviewed on their perceptions of development.

The FGDs comprised community members aged between 18 and 60 years who were sampled using the stratified sampling technique, from the 11 and 16 villages forming Kitonyoni and Mwanja respectively. The respondents were categorised by age and gender in order to limit inhibitions during the discussions and to understand their perceptions based on these categorizations, as gender has been found to be important in perceptions (Maocoby 2002). Each group comprised between 8 and 12 participants to make it easy for

the moderator to manage the group and to ensure effective interaction among the participants of the discussions. For the purpose of conducting the interviews, the interviewees were approached and a consent form was administered. After that, the appointment for the discussions was made. Replacements were done in instances where those selected were either unavailable or unwilling to participate. In total, 36 FGDs and 2 KIIs were held (See Table 1 for respondents' details).

Four experienced qualitative research assistants (2 male and 2 female) were trained on the research tools and conducted the group discussions in Kamba language, the language spoken in the study area. The KIIs were conducted in English since the two interviewed community leaders in charge of Kitonyoni and Mwanja sub-locations could freely express themselves. The areas of investigation in these discussions included the respondents' overall understanding of development as well as the understanding of development at personal, community and national levels. These issues were discussed one at a time. The training given to the research assistants covered rapport-creation and encouraging discussion of the issues raised amongst the respondents, allowing divergent views as well as consensus-building amongst the discussants. In all the questions/issues under discussion, the moderator probed for all possible responses from the respondents.

The data were audio recorded and later, those obtained from the FGDs transcribed and translated into English. A second examination of the translations after transcriptions was done in order to check for any inconsistencies and ensure reliability of the data.

Data processing and analysis

The data was coded in NVivo 9 software and analysed using the grounded theory approach whereby emerging themes from the data were summarised. In some cases verbatim quotes are used to illustrate responses on the relevant issues/themes. Selection of these quotes is done ensuring there is a balance along gender, age and sub-location. The first question posed to respondents was "What is development?" translated and administered in the local Kamba language as "Meendeonikyau?". The translation of the word "Development" into the Kamba equivalent "Meendeo" is derived from the Kiswahili translation "Maendeleo" which means progress, advancement or improvement (University of Dar-Es-Salaam 1981).

Kamba and Kiswahili languages belong to the Bantu group of languages hence the construction of the Kamba language is similar to that of Kiswahili, as is the example of the grammatical inflexion taking place at the beginning of the words and within the words (Ma-Maendeleo in Kiswahili and Me-Meendeo in Kamba) hence an intimate relationship in the conjugation of their nouns and verbs (Nurse 2008; Bryan 1961; Hinde 1904). In addition to this translation, the understanding and comprehension of the word 'development' by the respondents in this study could have been influenced by the community's experience and familiarity of the use of the word and the associated activities, given that language is dynamic and meanings attached to words and phrases may vary depending on context, historical experiences and previous uses attached to the words (Catford 1967).

The word 'Maendeleo' in the Kenyan context, with its variants depending on the location and community/language has been widely applied in the country to refer to the progress, advancement or improvement in the livelihoods and wellbeing for local communities, as demonstrated by the work of one national organization known as 'Maendeleo Ya Wanawake (MYW)' which also

Table 1. Characteristics of respondents

Method and respondent	Age-category	No. of individuals/groups
Household interviews	-	1085
FGD Women	18 to 24 years	6
FGD Women	25 to 40 years	6
FGD Women	41+ years	6
FGD Men	18 to 24 years	6
FGD Men	25 to 40 years	6
FGD Men	41+ years	6
KII community leader	-	2

derives its name from the word 'development' (MYO 2014). MYW's development agenda reflects the understanding and definitions adopted in this study, to improve the quality of life of rural communities in Kenya with some of these efforts including gender equality in development and improvement in governance (MYO 2014). The organization was registered in Kenya in 1952.

The approach adopted in this investigation is based on the recommendations proposed by Hennink et al. (2011). According to these recommendations, the respondents were allowed to mention, discuss and deliberate on the emerging issues and in some instances reach a consensus amongst themselves on the factors considered to mean/indicate personal, community and national development (Hennink et al., 2011). The moderator guided the discussions and if necessary probed to get more clarity on issues mentioned or to encourage discussants to exhaustively mention all the issues as they perceived them, sometimes following the mentioned issues to get more information.

RESULTS

Meaning of development

As demonstrated in these two quotes, the overarching definition of development in this study emerged to be its characteristic of upward mobility and a constant improvement in all spheres of life:

"...if I used to borrow a donkey from my neighbour, I stop and buy mine ... If I was using kerosene for lighting then I buy solar" Female 25-40 FGD, Mwanja.

"...even moving from a grass thatched house to one that has corrugated iron sheets" Male 18-24 FGD, Kitonyoni.

This study found that improving one's status through nurture and education, having a family and meeting basic needs were considered to be the most important indicators of personal development. At the community level, improvement in infrastructure and access to services, while addressing obstacles to development and involving community members in development projects were cited as the important pathways to community development. National development, on the other hand was reportedly

achievable through representative leadership and competent judicial systems.

In addition, availability of electricity was reported mainly by the youth to have potential in facilitating improved communication through internet connectivity thereby facilitating development at all the three levels. Development was also viewed as a hierarchical process where preference was given first of all to achieving personal/household development followed by community and finally national development since development at the lower level(s) was viewed as contributing to development at the subsequent levels. Further, although development was considered to be a responsibility of the government, with help from the donor community, those responding were also supportive of their community being involved in development initiatives. This involvement ranged from just being constantly kept informed of plans and progress of development initiatives to actual involvement in development activities through offering of labour or locally available resources such as community land, for implementation of development projects.

Personal/household development

Asked about what personal/household development meant to them, respondents in this study gave an overriding description of development meaning improvement in one's status in such areas as acquisition of education as a pathway to a better job, better incomes and therefore improvement in one's status as well as acquisition of assets that make life more comfortable and which also raise one's status. Having a family, specifically a spouse and children was also considered important as it raises one's social status.

Empowerment

Self-improvement through the acquisition of adequate

education as well as life-skills was reported to be an avenue through which personal or household development could be achieved. A majority of discussants in this study (regardless of age and gender) viewed education as an avenue to improve one's communication and avail more economic opportunities, as a form of empowerment whereby one's autonomy in decision-making, self-reliance, direct democracy and social learning is enhanced. In this study, education was considered crucial such that the inability to access education beyond primary and secondary levels was viewed as a characteristic of less-development, due to its limiting nature in accessing social and economic opportunities. The perceived importance of education in development in this study is emphasised in these quotes:

"Like getting enough education because the education that we have is not enough that can give us development that can match the times we are living in" Female 41+ FGD, Mwanja.

"Enough education is like going up to the university level and having the ability to communicate in any way because like now we have internet, the Facebook and you know, you can't do such without having enough education" Male 25-40 FGD, Mwanja.

The other form of empowerment reported to be important in fostering personal development relates to parental nurturing (physically, morally, religiously and culturally) enabling one to become self-reliant thus:

"In my opinion, development is from the time I was born by my parents [sic], bringing me up and showing me what is right and what is wrong ...what can harm me and what cannot, and they brought me up by teaching me how I can live in this Gods' word...took me to school..." Female 18-24 FGD, Kitonyoni

Asset-acquisition

In the quest to raise standards of living, this study found that people (across age and gender) considered acquisition of such assets like electricity, own source of water, radio, mobile phone, a car and businesses as indicators of progress. Acquiring assets to enable access to water was considered paramount, thus:

"I feel like I have some 'development' in my home because I have a small borehole that I have dug, and I use the water for my goats and irrigate a tree, so I feel I am doing well"Female 25-40 FGD, Mwanja.

Ownership of assets was important as it enabled households to meet other needs such as lighting,

communication and water.

Family

The most common social measures of personal development highlighted, especially by the older male respondents were marriage and children both as indicators and pathways to development. Yet, not only getting a spouse and children, but also providing for them was considered a sign of development. In addition, it was considered to be an important avenue of societal-continuity and empowerment, education and other forms of nurture. In this regard, having a family was given high importance as it accords one respect and a higher status among peers and in the community. In this study, having a family also had economic benefits since wives were considered to be important initiators of development through their interaction with other women. Consequently, many aspects of home improvement were handled by women while the 'bigger' development efforts like schooling and investment were reported to be preferably handled by men. To younger respondents, marriage and family were however not frequently mentioned as important aspects of one's personal progress, rather this was mostly emphasized by male older respondents:

"As you have heard, all of us have wives so a man who doesn't have a wife basically has nothing, what can he possibly discuss among men? He doesn't have a child, no goat, no dog. So that man who does not have a wife has basically nothing because she [wife] is the pillar to that man, anything even if it is a child is always under the care of the woman because even in my home I don't know the things that we have, but my wife does. So women are the foundation and pillars of us men in this area" Male 41+ FGD, Kitonyoni.

This perception may arise from the influence of global urban culture which values individualism and personal achievement and one that the younger generation are increasingly imbued with, including the youth in Kenya.

Community development

Community development was perceived as a state of availability and access of community resources and services, specifically, improved infrastructure and associated services such as having easily accessible and adequately equipped health facilities, good quality schools, accessible markets and good quality roads all of which were reported to have potential in helping improve the community's well-being outcomes.

Accessible roads' dual role emerged in this study

whereby it was reported to enable the opening up of the community to trade while at the same time enabling access of services and ensuring ease of transportation of farm produce to the markets, thus:

"...and if someone who is unwell, they can be taken to the hospital through good roads so that they won't suffer a lot by taking them to the hospital through the bushes" Female 18-24 FGD, Mwanja.

"Then, the mangoes just get lost (they go to waste), because where will the vehicles pass? ... that is a loss which would have brought profit to Kenya. They just end up rotting and yet they were to go to (be exported) abroad" Female 25-40 FGD, Kitonyoni.

Adequate and consistent supply of water at household and community levels was perceived to be important both as an indicator of individual/household development and a pathway to household and community development. Its importance as a recipe for development centred around its enablement of households to irrigate farms, thereby cultivating enough food and eliminating malnutrition and resultant illnesses and in the improvement of hygiene both at households and community levels, specifically at the health-facility level. Further, it was recounted that adequate water supply to enable house-hold to build bigger houses (which in itself was considered a form of development) and engage in businesses that require use of water. Most importantly, it was reported that this could significantly reduce the cost of water, which was Ksh. 8 to 10 for 20-litre jerry can (Ksh. 80 is approximately equivalent to USD 1) at the time of study and also reduce the time spent accessing it.

Absence of electricity in the community was highlighted as an impediment to the development of the community, as it is an obstacle to the acquisition and use of life-skills by the youth who miss formal higher education, forcing them to migrate to cities in search of opportunities, therefore denying the community their expertise. In the present study, electricity is perceived to have potential to spur growth through entrepreneurship while at the same time helping with provision and access of important services including health services such as maternal health, cold chains for vaccines and antidotes for snake and dog bites:

"Yes! If electricity comes within our area, the women will not have to go and be cut (undergo caesarean section) at Wote (the nearest town, which is approximately 50km away) since our dispensary here will have the theatre section" Female, 25-40 FGD, Mwanja.

"But if we had electricity just here around, such a person can work from within. They can weld doors and windows for people to buy and at the end of the day, that person

will just go and sleep at his home (own his own home), no one will ask him for rent" Female, 25-40 FGD, Kitonyoni.

It also overwhelmingly emerged that community development could only be improved once personal/household development had been achieved. For instance, even with availability of schools and health facilities as indicators of development, the community would still require trained expertise in order to provide the necessary services. Achievement of adequate education, cited as one of the indicators of personal development, would in turn ensure the community benefits from such training and expertise. In addition, most of the indicators of personal/household development were basics that were necessary for improvement in capabilities, thereby contributing to improvement in the community status. A male respondent said this to support this view:

"Development for me as a man from this community... I should be in a position to work and contribute something to this sub location. For example, I am a businessman and I spend my profit just within the community...I also educate children and if they would perform well, they would come back and help the people of this community as a whole" Male 41+ FGD, Kitonyoni.

The main custodian of development at the three levels however remains the government, supported by non-governmental organizations, with community members making contributions. Community participation in community development initiatives implemented was considered important, at all stages of development, including at initiation and monitoring of the projects.

National development

Some of the important factors for national development emerging in this study include good leadership which has potential to ensure sustained peace and progress for all Kenyans and credible facilities and institutions alongside poverty eradication efforts as well as gender, age and regional balance in leadership and equitable development. Similar to community leadership, it was reported that national development could better be achieved once individual/household and community development efforts are met. It was perceived that having improved leadership and other systems at the national levels was important but this would be pointless unless people's livelihoods at the household and community levels are met since an empowered populace would best participate in governance and leadership, a situation that would be difficult to achieve in the absence of improved capabilities for the populace and improved infrastructure and community services. Figure 1 shows a summary of Makeni

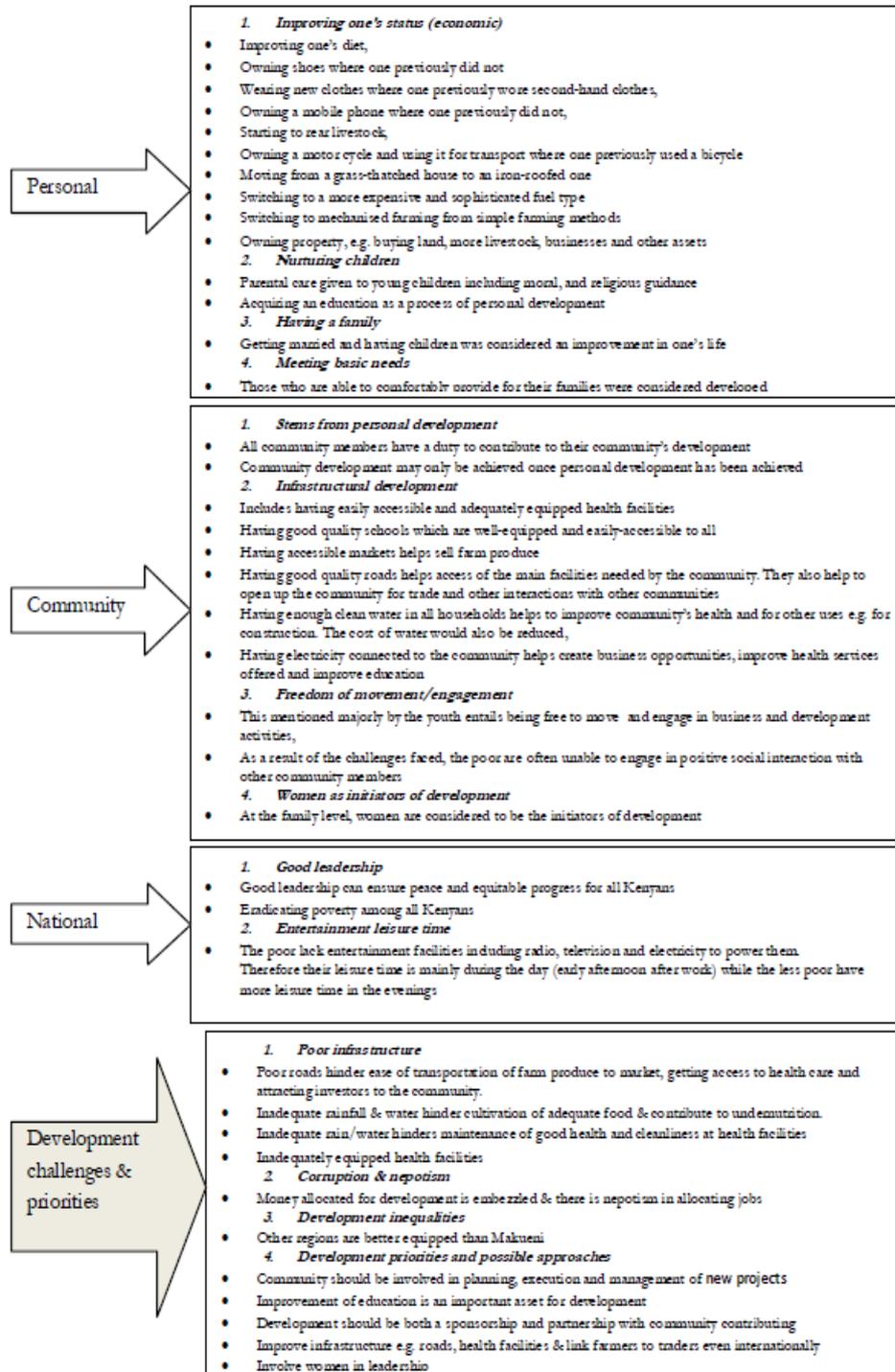


Figure 1. A summary of Makuani community perceptions of development.

community perceptions of development.

Willingness to participate in development

The community's perceived willingness to participate in community development was demonstrated through their actual participation in development initiatives at the time of study. Community engagement in development work was already being incorporated in development projects in the study community. A quote from a community leader emphasizes this ongoing process:

"Whenever there is a project to be implemented, my office facilitates the coming together of community members to fundraise for the project. At such times, we may even approach the CDF, LATF etc and we may also request well-wishers. At the same time, if the government has funds, we can access them. We may also bring women groups together where they plant trees in nurseries to sell so that this money can facilitate the projects" KII Community leader

Development as a hierarchical affair

This study reveals the community's perception of development to be hierarchical where it trickles up from the personal/household level, to community and to national levels. Perceptions of those responding in this study argued that although national and community development were considered important, prerequisite was given to personal/household development, otherwise, community and national development may take longer to be achieved. To those responding, meeting personal and household needs such as food, education, water, clothing, housing, was considered paramount as most are basics needed for survival, while community and national development efforts were more related to improvement in infrastructure and other community-level services that are not basics needed for survival. This trickle-up effect of development from the individual, to community and to the national level was highlighted by both community respondents and government leaders responding in the study. This quote from a community leader clearly outlines this importance:

"It should be a personal issue because the development of a nation depends on the development of an individual, therefore if an individual is developed, then the nation becomes developed too. Also a personal issues so that collective efforts of each individual can bring about greater change. It will be pointless if there is development at the national level when the individual person is not

developed" KII Community leader.

DISCUSSION

The purpose of this paper was to investigate how residents of Kitonyoni and Mwanja sub-locations of Makeni County perceive development, with the view of informing development studies and development approaches. This is particularly useful in the Kenyan and sub-Saharan context where there is existence of inadequate factual data about the development situation at the micro-levels from the perspectives of those residing in these areas. It is even more important focusing on a rural context in the region where a majority of the population reside, especially since the United Nations population division projects that a majority of Kenya's population (53%) will still reside in rural Kenya by 2025 (UN Population Division 2010). This study, presenting results from a qualitative study, provides a rich and dynamic understanding of development from the point of view of residents of these two study areas, which has potential in helping development practitioners to focus on communities' development priorities in these areas and others within the County.

Responding to the perceptions of development at the personal/household, community and national levels, development at the personal/household level mainly revolved around improvement of people's capabilities in order to improve their livelihoods and wellbeing. Having a family, specifically a spouse and children was considered important as it raises one's social status, a factor considered important in other studies (Trani, Bakhshi, and Rolland 2011; UNDP 2010b). This finding also corresponds to that in a study by Biswas-Diener and Diener (2001) in Calcutta slums of India where the importance of social relationships specifically family and friendships was articulated as it was reported to contribute to life satisfaction (Biswas-Diener and Diener 2001).

Although conducted in a different region and setting (urban slums whereas the current study was conducted in a rural setting), the findings from Biswas-Diener and Diener (2001)'s study mirror those in the current study, which found family to be an important social relationship. The other personal/household development areas that have potential to improve people's capabilities were reported to include having an adequate education, good nutrition, adequate shelter, absence of disease and freedom of movement, self-esteem and freedom from servitude (Sen 1999). Education has indeed been emphasized as being important in personal empowerment, for instance in Friedman (2001)'s study of inequality around the world (Friedman 2001), with Amartya

Sen also viewing education as an important factor that enables self-sufficiency (Sen 1999).

While personal/household development was largely perceived to be the improvement in people's capabilities, community development was viewed as a state of availability and access of community resources and services, specifically, improvement in infrastructure and associated services such as having easily accessible and adequately equipped health facilities, good quality schools, accessible markets and good quality roads all of which were reported to have potential in helping improve the community's well-being outcomes. The effect of good health infrastructure on access to health services cannot be underscored, based on findings from other studies in sub-Saharan Africa (SHDRP and UNDP 1998; Ahenkora 1999). For example, in Ghana poor health infrastructural development, such as the lack of electricity, was an obstacle to the provision of services requiring electricity while long distance to health facilities, poorly qualified health personnel and constant drug stock outs or high expense accessing drugs also emerged as major health infrastructural constraints (Ahenkora 1999).

The importance of electricity has also been emphasized in other studies investigating the importance of rural electrification in development and poverty reduction (Barnes 1988). At the national level, the most important factor perceived to drive development is good leadership. This emerged important due to its perceived potential in ensuring sustained peace and equitable development for all the regions of the country. In Malawi, people perceived corruption and nepotism to be constraints to national development, findings that are on the flip-side of those in this study, where respondents emphasized the positive aspect of good leadership in improving national development (Chipimo-Mbizule 1997).

This study also revealed the community's perception of development to be hierarchical where it ideally trickles up from the personal/household level, to community and to national levels. Those responding in the study emphasized on taking care of personal/household needs, most of which revolve around improving people's capabilities and functioning, factors that have been considered to be important in achieving equitable and sustainable development in other studies (Sen 1985; UNDP 2010b; Beard 2007; Binns and Nel 1999). A study in Indonesia found that households contributed to community development according to their own level of development or well-being (Beard 2007). Another study in South Africa found that involvement of communities in development initiatives through identification, implementation and management of development projects leads to development at the personal/household level through improvement in overall socioeconomic conditions benefiting households (Binns and Nel 1999).

It emerged in this study that unless efforts to improve education, health and livelihoods of individuals and households was achieved, most infrastructural development, like schools and hospitals, would lack the people with capacity to either use or offer services. In addition, the United Nations' definition of development reflects these development priorities. The UN emphasizes the importance of enlarging people's choices with the most important ones including, ensuring they have long and healthy lives, acquiring knowledge and enjoying descent standards of living (UNDP 2010b). Based on this study's findings, it is thus expected that personal/household development is likely to have a trickle-up effect in development at the higher levels, for instance by improving the country's human development index, a measure of development defined and supported by the United Nations and incorporated in development studies and approaches. The human development index (HDI) combines indicators of life expectancy, educational attainment and income, regarded as factors that are achievable at the personal/household level, into a composite human development index that assesses a country's level of human development (UNDP 2014).

Following the discussion of this study's findings, some similarities and differences have been drawn in some of the main findings, indicating that perceptions of development vary by context. This study reinforces the existence of variations in perceptions of development, where the interpretations and indicators are influenced by context (Ebdon 1995; SHDRP and UNDP 1998). Ownership of poultry and livestock as an indicator of wellbeing in Makueni for instance, was also reported in a study in Mongolia, a context that varies from that of Makueni (Ebdon 1995). Makueni residents – being a farming community – consider livestock and poultry insurance assets while in Mongolia those having smaller herds were considered to be poor because they are exposed to risk of losing all their stock and were therefore vulnerable to a rapid decline into poverty. Closer to Makueni, in Tanzania, livestock was considered an investment which can be converted into cash, food and other farm implements when needed (SHDRP and UNDP; 1998). Further, the study in Tanzania found some variation in the perceptions of wellbeing, in the various villages enumerated, depending on the main economic activities engaged in.

Variations in the main means of livelihood therefore influence how development is perceived since the Mongolian community depends on livestock for subsistence while Makueni and Tanzanian communities engage in farming as a means of livelihood. Further contextual variations were observed where water was regarded as the first development priority in Makueni. While water was also regarded as an important need in a similar semi-arid

context, this was however not ranked as the most important need (Brock 1999). This indicates that even in similar circumstances, people's perceptions may vary. In addition, discussants in this study clearly outlined the potential benefit that an adequate and constant supply of water at household and community levels could have on development and poverty reduction, a clarity that has yet to be made in other perception of development studies, indicating that if development priorities were based on this, improvement in the wellbeing and development of Makueni residents could be enhanced. The study therefore also adds to the known indicators of wellbeing and areas that development efforts in Makueni County could target. While the Makueni district development plan articulates orphan-hood, disease, disability and environmental conservation as some of the challenges faced in the County and which development efforts seek to target (NCAPD 2005), the present study expands the list and shows the priority areas of need as articulated by the study's respondents.

CONCLUSIONS

Following the findings of this study, emphasis is placed on the importance of rethinking development and ensuring that both macro and micro approaches are given equal importance since context may influence importance and ranking of development needs. This importance cannot be better emphasized than through the existence of variations in macro and micro indicators of poverty in studies in the country and the region. In Uganda for instance, household quantitative data was found to be inadequate in understanding poverty (McGee 2004) while Kenya's poverty reduction strategy paper (PRSP) was found to vary with the problems and priorities articulated by residents of 80 rural communities in 10 districts of Western Kenya (Swallow 2005). The present study also emphasizes prioritization of development such that while community infrastructure and access to services and national leadership and judicial systems are important and although they need to be improved, in the face of limited resources, priority needs to be put in place to improve the living standards at personal/household levels before moving to community factors. Community potential in embracing and participating in development is also possible as found in this study. Kitonyoni and Mwanja communities were found to be keen in participating in development projects, demonstrated by their involvement in already on-going development efforts as well as in their ability to articulate and rank their needs and priorities. This lends support to the need for development practitioners to adopt more participatory development approaches which have potential in

unearthing needs that may be overlooked when development priorities are determined by outsiders or when development and poverty studies and initiatives are approached solely from a macro-level disregarding the importance of micro-level approaches.

REFERENCES

- Ahenkora K (1999). The contribution of older people to development: the Ghana case. HelpAge International/HelpAge Ghana/DfID.
- Alkire S, Roche JM, Sumner A (2013). "Where Do the World's Multidimensionally Poor People Live?" Oxford Poverty & Human Development Initiative (OPHI) Working Paper no. 81. <http://www.ophi.org.uk/wp-content/uploads/ophi-wp-81.pdf?79d835>
- Alwy A, Schech S (2007). "Ethnicity, Politics, and State Resource Allocation: Explaining Educational Inequalities in Kenya." Springer International Handbooks of Education 19:129-144. http://link.springer.com/chapter/10.1007%2F978-1-4020-5199-9_7
- Bahemuka J, Nganda B, Nzioka C, Gakuru O, Njeru E (1998). "Analysis and Evaluation of Poverty in Kenya." In *Poverty Revisited: Analysis and Strategies Towards Poverty Eradication in Kenya* edited by Bahemuka J, Nganda B and Nzioka C. Nairobi: Ruaraka Printing Press.
- Barnes DF (1988). *Electric power for rural growth: How electricity affects rural life in developing countries*. Boulder: Westview Press.
- Beard VA (2007). "Household Contributions to Community Development in Indonesia." *World Dev.* 35(4):807-825. doi: <http://dx.doi.org/10.1016/j.worlddev.2006.06.006>
- Binns T, Etienne N (1999). "Beyond the development impasse: the role of local economic development and community self-reliance in rural South Africa." *J. Mod. Afr. Stud.* 37(3):389-408. <http://eprints.ru.ac.za/716/1/Impasse.pdf>
- Biswas-Diener R, Diener Ed (2001). "Making the Best of a Bad Situation: Satisfaction in the Slums of Calcutta." *Soc. Indic. Res* 55(3):329-352. doi: 10.1023/a:1010905029388
- Brock K (1999). It's not only wealth that matters-it's peace of mind too: A Review of Participatory Work on Poverty and Illbeing. In *Consultations with the Poor: Global Synthesis Workshop*. Washington DC: Poverty Group, PREM, World Bank.
- Bryan MA (1961). "The Bantu Languages of Africa by M. A. Bryan." *Language* <http://www.biblio.com/book/bantu-languages-africa-m-bryan/d/485654020>
- Catford JC (1967). *A Linguistic Theory of Translation*. Oxford: Oxford University Press.
- Chambers R (1983). *Rural development: Putting the Last First*. Essex: Longman.
- Chambers R (2005). *Ideas for Development*. London: Earthscan. http://books.google.com.ng/books/about/Ideas_for_Development.html?id=dsTBkFnYjRYC&redir_esc=y
- Chipimo-Mbizule C (1997). Lusaka Longitudinal Livelihood Cohort Study. In *Baseline Study in peri-urban Lusaka: CARE Zambia*.
- Ebdon R (1995). Poverty perceptions among rural herders and sum inhabitants of Chuluut sum, Arkhangai Aimag in Mongolia. Ulaanbaatar, Mongolia: Centre for Social Development and FAO.
- Fotso JC (2006). "Child Health Inequities in Developing Countries: Differences across Urban and Rural Areas." *Int. J. Equity. Health* 5(9):1-10.
- Frieden J (2001). "Inequality, causes and possible futures." *Int. Soc. Sci. Rev.* 2(1):33-40.
- GOK (2006). *Agricultural Annual Report, Makueni District Government of Kenya*. Ministry of Agriculture, Livestock and Fisheries, Makueni.
- Gujit I Shah MK (1998). "Waking up to power, conflict and process." In *The Myth of Community: Gender Issues in Participatory Development*, edited by Gujit I and Shah MK. London: Intermediate Technology Publications.

- Hennink M, Hutter I, Bailey A (2011). *Qualitative Research Methods*. London, California, New Delhi and Singapore: Sage.
- Hinde H (1904). *Vocabularies of the Kamba and Kikuyu languages of East Africa*. Cambridge: Cambridge University Press.
- IFAD (2010). *Rural poverty report 2011. New realities, new challenges: new opportunities for tomorrow's generation*. Rome: International Fund for Agricultural Development (IFAD). <http://www.ifad.org/RPR2011/>
- KIPPRA-CORNELL (2004). *Quantitative and qualitative methods for poverty analysis*. Paper read at Proceedings of the Workshop on the quantitative and qualitative methods of poverty analysis held on 11 March, at Nairobi. <http://www.saga.cornell.edu/saga/q-qconf/q-qconf.html>
- KNBS, ICF Macro (2010). *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro. <http://dhsprogram.com/pubs/pdf/SR178/SR178.pdf>
- Laderchi CR (1997). "Poverty and its many dimensions: The role of income as an indicator." *Oxford Agrarian Studies* 25 (3):345-360. doi: 10.1080/13600819708424139
- Laderchi CR, Saith R, Stewart F (2003). "Does it Matter that we do not Agree on the Definition of Poverty? A Comparison of Four Approaches." *Oxford Dev. Stud.* 31(3):243-274. doi: 10.1080/1360081032000111698
- Ledwith M (1997). *Community Development: A Critical Approach*. Birmingham: Venture Press.
- Macoby EE (2002). "Gender and Group Process: A Developmental Perspective." *Curr. Dir. Psychol. Sci.* 11 (2).
- MacQueen KM, McLellan E, Metzger DS, Kegeles S, Strauss RP, Scotti R, Blanchard L, Trotter RT (2001). "What is community? An evidence-based definition for participatory public health." *Am. J. Pub. Health* 91(12):1929-1938.
- Maxwell S (2001). "The evolution of thinking about food security." In *Food Security in Sub-Saharan Africa*, edited by Devereux S and Maxwell S, London: ITDG Publishers. pp. 13-32.
- McGee R (2004). "Constructing Poverty Trends in Uganda: A Multidisciplinary Perspective." *Dev. Chang* doi: 10.1111/j.1467-7860.2004.00363.x. 35(3):499-523.
- McKinley T (1997). *Beyond the Line: Implementing Complementary Methods of Poverty Measurement*. UNDP Technical Support Document. p. 3.
- Muhula R (2009). "Horizontal Inequalities and Ethno-regional politics in Kenya." *Kenya Studies Review* 1 (2).
- MYO (2014). *Maendeleo Ya Wanawake* <<http://mywokenya.org/>> Accessed January 05.
- NCAPD (2005). *Makueni District Strategic Plan 2005-2010 for Implementation of the National Population Policy for Sustainable Development*. National Coordinating Agency for Population and Development. <http://www.ncapd-ke.org/images/stories/districts/Makueni>
- Nurse D (2006). "Focus in Bantu: verbal morphology and function." *ZAS Papers in Linguistics*. 43:189-207.
- Nzioka C (2000). *Makueni district profile: Human resource management, 1989-1998*. Drylands Research Working p.9.
- Oxfam (2006). *delivering the agenda*, Oxfam International briefing paper. [http://www.disasteriskreduction.net/fileadmin/user_upload/drought/docs/Kenya%20Arid%20Lands%20OXFAM%20final\[1\].pdf](http://www.disasteriskreduction.net/fileadmin/user_upload/drought/docs/Kenya%20Arid%20Lands%20OXFAM%20final[1].pdf)
- Republic of Kenya (1979). *National Development Plan 1979-1983*. Nairobi: Government Printer.
- Republic of Kenya (2009). *Makueni District Development Plan 2008-2012*. edited by Office of the Prime Minister Ministry of State for Planning National Development and Vision 2013. Nairobi: Government Printer.
- Republic of Kenya (2011). *Availability of Energy Sources, by County*. Kenya Open Data 2011a [cited August 3 2011]. Available from <http://www.opendata.go.ke/Energy/Availability-of-Energy-Sources-by-County/g9hi-bs9n>
- Republic of Kenya (2011). *County Data Sheet: Makueni 2011b* [cited August 5 2011]. Available from <http://opendata.go.ke/facet/counties/Makueni?&page=4>
- Sahn DE, Sahn DE (2004). *Urban-Rural Inequality in Living Standards in Africa*. Working Papers UNU-WIDER Research Paper World Institute for Development Economic Research (UNU-WIDER).
- Sen A (1985). *Commodities and Capabilities* Amsterdam: North-Holland.
- Sen A (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Sen A (2010). *Development as Freedom*. Oxford: Oxford University Press.
- SHDRP, UNDP (1998). *Participatory Poverty Assessment, Shinyanga Region, Tanzania*. In *Shinyanga Human Development Report Project*.
- Smith LC, Ruel MT, Ndiaye A (2004). *Why is Child Malnutrition Lower in Urban than Rural Areas? Evidence from 38 Developing Countries*. In *Discussion Paper BRIEFS: Discussion Paper 176: IFPRI*.
- Swallow B (2005). "Potential for Poverty Reduction Strategies to Address Community Priorities: Case Study of Kenya." *World Development* 33(2):301-321. doi: <http://dx.doi.org/10.1016/j.worlddev.2004.07.015>
- Szirmai A (2005). *The Dynamics of Socio-Economic Development: An Introduction*. Cambridge: Cambridge University Press.
- Tiffen M, Mortimore M, Gichuki F (1994). *More people, less erosion: environmental recovery in Kenya*. Chichester, United Kingdom: John Wiley and Sons.
- Trani JF, Parul B, Cécile R (2011). "Capabilities, Perception of Well-being and Development Effort: Some Evidence from Afghanistan." *Oxford. Dev. Stud.* 39(4):403-426. doi: 10.1080/13600818.2011.620089
- UN Population Division (2010). *World Urbanization Prospects: The 2009 Revision*. New York: United Nations. http://esa.un.org/unpd/wup/Documents/WUP2009_Highlights_Final.pdf
- UNDP (2010a). *Human Development Report 2010. 20th Anniversary Edition, The Real Wealth of Nations: Pathways to Human Development*. http://hdr.undp.org/sites/default/files/reports/270/hdr_2010_en_compl_ete_reprint.pdf
- UNDP (2010b). *Human Development Reports* <Accessed December 1 2010>. United Nations Development Programme <http://hdr.undp.org/en/content/human-development-report-2010>
- UNDP (2014). *Human Development Index (HDI)*. United Nations Development Programme (UNDP) 2014 [cited February 10 2014]. <http://hdr.undp.org/en/statistics/hdi>
- United Nations (2011). *The Millennium Development Goals Report 2011*. Geneva: United Nations. http://www.un.org/millenniumgoals/MDG2011_PRa_EN.pdf
- University of Dar-Es-Salaam (1981). *Kamusi ya Kiswahili Sanifu*. Nairobi: Oxford University Press.
- World Bank (2009). *Kenya Poverty and Inequality Assessment*. In *Poverty Reduction and Economic Management Unit Africa Region: The World Bank*. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSPIB/2009/07/21/000333037_20090721003150/Rendered/PDF/441900ESW0P0901ICODisclosed071171091.pdf
- World Bank (2010). *World Development Report 2010*. New York: The World Bank. <http://web.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTWDRS/0,contentMDK:23062354-pagePK:478093-piPK:477627-theSitePK:477624,00.html>

10.2: Factors influencing perceptions of development in rural Kenya: a structural equation modeling approach

FACTORS INFLUENCING PERCEPTION OF DEVELOPMENT IN RURAL KENYA: A STRUCTURAL EQUATION MODELING APPROACH

Hildah Essendi
Social Statistics & Demography,
University of Southampton
UNITED KINGDOM

Nyovani Madise
Social Statistics & Demography,
University of Southampton
UNITED KINGDOM

ABSTRACT

Data from 275 individuals, collected at the individual and household levels were analyzed using structural equation modeling techniques to examine relationships between perception of development and observed socio-economic, demographic and wellbeing variables. Perception of development was computed using 6 development-progressive statements administered in a survey, most of which relate to the future development of the respondent's community and on satisfaction with participation in development activities. The relationship between perception of development and other perceived factors such as perceived importance of electricity in development, perceived household wellbeing and perceived health were examined, after controlling for demographic and socio-economic factors such as age, gender, education, household wealth, parity and health risk factors including alcohol use and smoking. Significant relationships were found between perception of development and gender, age, perceived household wellbeing and health risk factors (alcohol use and cigarette smoking). Women and younger people had more positive perceptions of development than men and older people respectively. Perceived household wellbeing, alcohol use and smoking were also positively associated with positive perceptions of development. These results indicate that even within the same community, people's perceptions will vary depending on their age, gender, perceived household wellbeing and health risk factors including alcohol use and having ever smoked tobacco products. The study, conducted in an ethnically, culturally and economically homogenous rural poor community however did not find significant effects between perception of development and objective household wealth, level of education, parity and perceived health. Further studies need to be conducted that can study perceived development separately for males and females and also in a community that shows some economic, cultural and social variations. This would help tease out the differences in perceptions of development, which could not be adequately established in this study.

Keywords: Development, Perceptions, Structural Equation Modeling, Rural poor, sub-Saharan Africa, Kenya.

INTRODUCTION

Importance of Perceptions and Participatory Development

While the involvement of local communities in their development is widely recognized as a key step in sustainable and equitable development (Chambers R, 1983; Sen A, 1999), very few rural development projects in sub-Saharan Africa and in Kenya use this approach. Recognized as a potentially beneficial approach to meeting the needs of beneficiary communities because of the ability to help prioritize community felt needs, participatory development has either been partially used or not used at all (Claude Saha, 2008; Essendi H, Madise N, & Matthews Z, 2014). Yet, participatory development continues to be hailed as a

potentially beneficial approach in ensuring sustainable development, whose prerequisite is seeking to understand people's views regarding development and the determinants of these perceptions. This approach has potential in helping determine the best way to engage with them in implementing development projects that can best benefit them and at the same time be sustainable. Most importantly, understanding these views/perceptions and the factors influencing them can help inform the design of development projects that would not only fully involve community members but also design approaches targeted at particular groups based on their perceptions of development or of participation in development initiatives.

Perceptions and Development Participatory Approach In Kenya

Despite increased emphasis on the need to shift the development efforts towards more community-engaged approaches (Chambers R, 1983; Sen A, 1999), this approach has rarely been used in development projects in Kenya. Even fewer initiatives have incorporated this approach in development projects targeting the rural poor in the country, where most of the Kenyan population resides and where in many instances, health and development outcomes fare far worse than urban Kenya's (KNBS & ICF Macro, 2010). Yet, employing decentralized approaches in the country, more specifically participatory development has potential to drive equitable and sustainable development. The climatic, cultural, economic and infrastructural diversity within and between the regions of the country point to the need to employ a development approach that has potential to approach each group/region of the country as a separate entity in development efforts (KNBS & ICF Macro, 2010). Makueni County where the present study is located, for instance faces some of the poorest infrastructural, wellbeing and health outcomes, reinforcing the importance of approaching development in each region/County of the country as a separate entity where people's views about these efforts are also sought (CBS, World Bank, SIDA, & SID, 2005).

Amartya Sen's Capability Approach

This study employs the Capability Approach to development as posited by Amartya Sen (1999), where he defines development as a process of expanding the real freedoms that people enjoy (Sen A, 1999). Using this approach, Sen views poverty, this is the flip-side of development, as more than a lack of material resources. He emphasizes that although material resources are recognised as being necessary, they are nonetheless not sufficient to escape poverty and therefore enhance development and that poverty (and development) must be seen as the deprivation of basic capability rather merely as income based measure. In order to address sustainable development therefore, the Capability Approach has two main tenets; Capability and Functioning whereby Functioning relates to the things that a person may value being and doing and these vary from very simple ones for instance, having proper nourishment, being free from preventable disease and premature mortality to complex ones like being able to participate in community activities (Sen A, 1999). Capability on the other hand refers to the factors that enhance people's freedoms. Capability and Function concepts are therefore used to emphasize the need to expand the real freedoms that people enjoy, including; political freedoms, economic facilities; social opportunities; transparency guarantees and protective security. Sen further argues heavily against looking at development as just the rise or fall in incomes. Rather, income should be considered to be valuable only in so far as it can increase the capabilities of individuals and thereby enable people's functionings in society (Sen A, 1999).

In addition to understanding these two main principles of development (Capability and Functioning), Sen (1999 p. 19) also talks about the role of an agent in development-bringing about a change in society. He talks of an agent '*...as someone who acts and brings about change, and whose achievements can be judged in terms of her own values and objectives, whether or not we assess them in terms of some external criteria as well.*' He further stresses that the role of an agent can be through an individual or member of society and as a participant in economic, social and political actions (Sen A, 1999). This perspective points to the importance of community participation in development. His contribution to the debate on community participation in development emphasizes the importance of empowerment of beneficiary communities (Sen A, 1999).

CONCEPTUAL FRAMEWORK

The background and theoretical approach reinforce the need to revisit the issue of participatory development approach that includes understanding of people's perceptions of development and the factors influencing these perceptions, both issues that have potential to enhance participatory development approaches. To address this research area, this paper seeks to assess the factors influencing perceptions of development using a Structural Equation Modeling approach. This paper fits a model adapted from Porter & Garman's Conceptual Model of Financial Well-Being (Porter NM & Garman ET, 1993). We adapt this model, after reviewing literature by these and other researchers on the factors influencing well-being. Although no single approach exists focusing on the factors influencing the perceptions of development, there has been extensive research into the factors influencing the perceptions of well-being, ranging from objective factors such as demographic characteristics to socio-economic characteristics and subjective (perceived) factors (Hayhoe CR, 1990; Leach LJ, Hayhoe CR, & Tumer PR, 1999). Factors influencing perceptions of wellbeing are adopted in this study because although perceptions of wellbeing and development are different concepts, they nevertheless are close enough and are both perceived concepts of improved livelihoods.

Gender: Among the demographic characteristics argued to have an influence of perceptions of well-being, is gender, argued to have a big influence on perception of economic well-being as this relates to the engendered roles that individuals are socialised in, hence the need to seek the views of both gender in wellbeing studies and efforts (Hayhoe CR & Wilhelm MS, 1998). Other researchers have also found gender to have a big impact on perceptions of wellbeing (Leach LJ et al., 1999). Findings of these studies argue therefore that, in order to clearly understand the perceptions of well-being, researchers need to put into consideration the role that gender plays, as these views are quite engendered.

Age: Age of participant has also been found to be a significant factor in the perceptions of one's economic well-being. It has therefore been used as a background factor in studies investigating perceptions of well-being (Leach LJ et al., 1999).

Other objective factors: While Hayhoe & Wilhelm focus on the variations in perceptions of well-being by men and women at the family setting, they also include other objective variables, that they argue, can potentially contribute to these perceptions (Hayhoe CR & Wilhelm MS, 1998). These factors are given both at the individual and household level. They include various factors included in the model besides gender and age. Education and health of participant at the individual level and household income and size at the household level are some of the factors found to influence perceptions and therefore included in this model.

This present study groups the factors that are likely to influence the perception of development into three blocks; personal characteristics, represented by age, gender and parity; socio-economic characteristics focusing on household wealth status and respondent's education level and perceived attributes focusing on perceived health-risk factors, perceived household economic wellbeing and perceived measure of development (this study uses the perceived importance of electricity in development) as subjective variables (Figure 2). The study incorporates the importance of electricity as a proxy for perceived development, based on the reported importance of electricity in socio-economic development (Kanagawa M & Nakata T, 2008) through such means as creating opportunities for growth. Two community variables (place of residence-district and source of water) are also considered in the descriptive analysis of this paper, although they are not included in the model as these variables do not show variations for the respondents. Place of residence is used to give a context-background to the interpretation of the results. Source of water at the household on the other hand, is used to show the level of socio-economic status of the community. As postulated by Porter & Garman (1993), perceived factors are used as mediating factors on the effects of the personal and socio-economic characteristics on perception of development (Porter NM & Garman ET, 1993). Other studies have used mediating factors in assessing the effects of these primary factors on the outcome variable. Leach et al (1999) used two mediating variables (comparison of Economic Outcomes and Level of Financial Strain) as mediating factors on the effects of individual, socioeconomic and other study-specific variables on the outcome variable (Leach LJ et al., 1999).

While seeking to understand beneficiary communities' views regarding development, incorporating the factors that influence these views can greatly help the Kenyan government, county governments and development practitioners to apply focused approaches in understanding beneficiary communities' felt needs and their perceptions and development priorities thereby designing sustainable strategies that meet the needs of rural communities.

The research presented in this paper seeks to understand factors influencing perceptions of development among members of Kitonyoni sub-location of Makueni County. This study hypothesises that individual personal and demographic characteristics as well as health risk factors and perceived attributes influence their perception of development in their context. Based on the model of perceived development (Figure 1), this paper seeks to assess:

1. Whether the hypothesised model fits the data
2. Whether there is there a significant relationship between the personal characteristics, socio-economic characteristics, health risk factors and perceived attributes and Perception of Development. It also seeks to assess whether the variance between these factors in the model are significant (see figure 1).

METHODOLOGY

Study Setting

The study was conducted in Kitonyoni sub location of Kathonzweni district in Makueni County in October 2012. The sub-location, an area covering 27.1 sq km and Density of 96 has a total population of 2,500; 1,284 males and 1,306 females (KNBS, 2010). Makueni county is a semi-arid area where residents traditionally depend on farming as the primary means of livelihood, although now shifting to other means of livelihood, specifically, migrant labour to the towns and cities as a result of increased poverty in the district (Nzioka C, 2000).

Data

The study uses individual and house-level data collected from a sample of 275 of the 487 households in the sub-location. Within the sampled households, a male and female of reproductive age (18 and 49 years for women and 18 and 54 years for men) were selected and interviewed in each household alternately. Questions were asked on household economic status, respondent's education level, parity, perceived health, perceived household wellbeing and perceived importance of electricity in development. Their health risk was also assessed by collecting data on their smoking and alcohol consumption habits.

Dependent Variable

The outcome variable is perception of development (PerDv1pt), using variables generated by asking 5-point scale questions. Respondents were asked a set of questions that reflect their perceptions of future development, their participation in development activities and custodianship of development. These questions/statements include:

1. Community development in this area is a responsibility of government
2. International community has a responsibility to help in development e.g. climate
3. How satisfied are you with the level of your personal involvement in development?
4. How satisfied are you with the level of your community's involvement in development?
5. How do you feel about being asked to participate in development activities?
6. How much do you think that development in your community will improve?

Methods

This paper uses structural equation modelling (SEM) using the IBM SPSS Amos 20 package (Byrne BM, 2010) to assess the relationship between perception of development and the selected predictor variables. SEM is used in this paper because of the latent nature of the perception of development variable, being a complex and multi-faceted variable that cannot be adequately captured by the use of one variable, hence is computed using 6 variables (Figure 2 and Table 1). Using SEM's two main assumptions, that the causal processes under investigation are presented by a series of structural (regression) equations; and that these structural relations can be modelled pictorially to enable a clearer conceptualization of the theory under investigation, this paper models the personal, socio-economic and wellbeing factors hypothesised to influence perceived development (Byrne BM, 2010). The process statistically tests the hypothesised model in a simultaneous analysis of all the variables in the hypothesis to determine the extent to which it is consistent with the data (Byrne BM, 2010).

Running SEM

This was done using a two stage approach. The first model run was Confirmatory Factor Analysis (CFA). This was run to test the measurement model and was run first before proceeding with the structural equation model. Running CFA was done in the first stage in order to test whether the relationships specified between the latent variable (perception of development) and the observed variables give a good fit. Once this was done, Latent Variable Path Analysis (LVPA) which incorporates the relationships between the observed variables and latent variable and the error/residuals, was done (see figure 2)

Variables In The Model

Variables in the model are grouped into 4 as outlined in Table 2. These groups are:

1. Observed, endogenous variables
2. Observed, exogenous variables
3. Unobserved, endogenous variables
4. Unobserved, exogenous variables

The paper incorporates some community factors which were not incorporated in running the model because there are no variations in the sample regarding this (Figures 1 & 3 and Table 3). The two community variables are place of residence (district) and source of drinking water at household (see table 3).

Perceived Health (Hgeneral): Perceived health was computed using one perceived health indicator that reflected the respondent's perceived general health.

Perceived Family Wellbeing (HHWB): Perceived family wellbeing was constructed using one scale variable reflecting perceived family position on a 10-point wellbeing ladder.

Perceived Development Factor (DvlptElec): This endogenous variable refers to whether the community perceives electricity to be important in the development of their community.

Perceived Development (PerDvlpt): The six indicators of perceived development (Table 1) focus on the respondents' satisfaction with engagement in development projects and future development prospects. All the variables contribute factor loadings to the latent variable (PerDvlpt). The statements used to compute this variable all represent a positive attitude towards the community's involvement in development and on the future prospects of the community's development. They capture the respondent's level of satisfaction in regards to involvement of self and community in development projects as well as the anticipated prospects of development in the community.

Dependent Variable

The dependent variable in this paper, perception of development (**PerDvlpt**) was computed using 6 observed/endogenous variables. These are P2, P3, P4, P5, P6 and P7 (Table 1). These were administered to the respondents in form of statements/questions in a questionnaire.

RESULTS (see table 2)

Assessment of model fit

Assessing how best a structural equation model fits the data is one of the most important steps in structural equation modeling. In this study several tests were done to assess how the model fits the data, based on the recommendations of several researchers (Bentler PM & Bonnett DG, 1980; Joreskog KG, 1993). Chi-square test is one of the recommended goodness of fit tests. The chi-square value in this paper, at 138.075 (df=44) with p=0.000, indicates that the mode is not a good fit. However, it is also recommended not to only rely on chi-square as the measure of a good fitting model, rather to include other measures such as the Root Mean Squared Error of Approximation (RMSEA), Incremental Fit Index (IFI) and Comparative Fit Index (CFI) (Byrne BM, 2010). This is because chi-square tests tend to depend on sample sizes while RMSEA takes into account this approximation error (Byrne BM, 2010). These

other goodness of fit tests indicate that the model is a good fit for the data. The (RMSEA) value was 0.055 [0.040, 0.069] indicating that the model is an acceptable fitting model. The RMSEA value less than .05 is considered an indicator of a good model fit while a value between 0.05 and 0.08 is considered an acceptable fit (Bentler PM & Bonnett DG, 1980). The goodness of the assessment of fit was also supported by the high Incremental Fit Index (IFI = 0.927) and Comparative Fit Index (CFI = 0.922) as proposed by Bentler and Bonnett (Bentler PM & Bonnett DG, 1980). The CFI and IFI values normally range from 0 to 1 with 0 indicating the absence of model fit and 1 indicating perfect model fit. A CFI/IFI value of approximately .9 can be interpreted as a good model fit. These approaches have previously been used to test model fit in structural equation models.

(See table 3 & 4)

Measurement Model

The estimated unstandardized coefficients and their associated *p* values for the measurement variables on the various latent variables and on perceived development are reported in Tables 3 and 4.

Default Model

Perceived household wellbeing (HHWB) had a significant effect on perceived development. This effect however indicated a negative direction, where the total effect of household wellbeing on Perception of Development was -0.080 implying that when household wellbeing (HHWB) goes up by 1 measurement scale value, Perception of Development reduces by 0.08 scale values (this is on a scale of 1 to 10). Perceived health (Hgeneral) household wealth and perceived importance of electricity in development on the other hand did not have a significant effect on perceived development. The various effects are: perceived health (0.043), wealth (0.074) and perceived importance of electricity (0.044). These variables do not have such big effects on Perception of development; as perceived health (Hgeneral) and perceived importance of electricity on development (DvlptElec) go up by 1 measurement scale value on a 5-point measurement scale; perception of development (PerDvlpt) goes up by 0.043 scale values and 0.044 measurement scale values respectively.

Effects of Observed, Exogenous Variables

Gender, age, and health risk factors (alcohol use and smoking) were the only exogenous personal and socio-economic characteristics variables that had significant effects on perception of development (PerDvlpt) with gender having highly significant effect on perceived development. The direct effect of gender on perceived development was -0.321, indicating that women had higher perceptions of development compared to men. This effect (combined direct and indirect effect) however slightly reduced to -0.391 when mediated with household wellbeing (HHWB), perceived health, and perceived importance of electricity in development. The direct effect of alcohol consumption on perceived development on the other hand was 0.260 which increased slightly to 0.262 when mediated with perceived health. Cigarette smoking's effect on perceived development was 0.212 but increased slightly (for the total effects) when mediated with perceived health.

The effect of age on perception of development was borderline significant, where its direct effect on perceived development was in the negative direction, at -0.006. This effect (factor

value) did not change when mediated with perceived importance of electricity on development. In addition, the effect of age on perception of development is on a small scale, such that 1 year's increase in age reduces the measurement scale value of perception of development by 0.006 scale values. Younger respondents were therefore likely to report higher perceptions of development regardless of gender, level of education, perceived household wellbeing, perceived health and health risk factors, including cigarette smoking and alcohol consumption.

Education and parity did not have significant effects on perceived development with values of -0.064 and 0.026 respectively, implying that level of education and number of children did not influence one's perception of development.

Revised Model of Perceived Development

After fitting the model for perceived development with personal, socio-economic and perceived factors, the results were analysed and amendments made to the model. One of the main reasons for these amendments was arrived at after assessing how well the model fits the data. To do this, the source of misfits in the model had to be identified as proposed by Byrne (2010) where she proposes that a focus is made on the adequacy of the parameter estimates and the model as a whole (Byrne BM, 2010). Variables that had correlations of >1.00 and those with negative variances and covariance were dropped from the hypothesised model, and a new one (Figure 3) before it was re-run.

(See figure 3)

In this section please present the results including tables, figures, numbers and graphs (if any). Font Size 12, Times New Roman, single spaced. All the subheadings in this section should be in font size 12 Bold, Times New Roman, single spaced. The first letter of each word in subheading should be capital. For tables please use font size 10. Tables/graphs or figures should be named as Table 1/ Figure 1/ Graph 1 and be given in center of the page.

DISCUSSION

This study found gender to be highly significant in its association with perceived development; women were found to have higher (more positive) perceptions of development compared to men. This emphasizes the importance of gender as found in other studies, especially those investigating factors influencing perception of economic wellbeing (Leach LJ et al., 1999). All these studies highlight the importance of gender as they argue that socialization engenders the viewpoints that men and women have and would therefore influence how they perceived their economic situations. In some of these studies, these analyses are even conducted separately, which differs from the analysis in the present study which had very few data to run the model once the data was split by gender. The issue of considering gender in development initiatives has also been emphasized by other development studies (Lilja & Dixon, 2008).

Although household wealth status in this study did not have a significant effect on perception of development, the same variable, objective economic wellbeing, measured using household income or wealth status has been found to have an impact elsewhere (Bookwalter JT & Dalenberg D, 2004). A recently published paper from this study also found that people's circumstances will influence how they perceive their circumstances (Essendi H et al., 2014).

Another study looking at the impact of household factor on subjective well-being in South Africa found that different factors were important among groups based on socio-economic status (Bookwalter JT & Dalenberg D, 2004). Although the theme of this paper was not directly related to the present study (perceived development), it nevertheless points to the importance of economic wellbeing. This current study finds the average perceived family position on a 10-step development ladder to be 2.32 with a standard deviation of 0.04 and median of 2, indicating a very low perception of one's wellbeing. In addition, other socio-economic characteristics including access to water, household income, housing material and education status (Table 3) point to a poor community. Consequently, these results may influence one's perception of development. Other studies, although focusing on perceptions of one's economic wellbeing have found perceived financial situation, in comparison to friends or neighbours to have a significant effect on one's perceived economic wellbeing (Hayhoe CR, 1990; Porter NM & Garman ET, 1993).

There is need to conduct further research on the wellbeing factors affecting perception of development in a more culturally and economically diverse community in order to adequately assess the impact of these factors on perceived development. This is because some of the studies investigating the factors influencing perceived economic wellbeing do find culture, social class, and ethnicity as important factors in how one perceives their situation because the personal values they hold often lead to differences in these perceptions (Hayhoe CR, 1990; Leach LJ et al., 1999). Further investigation therefore is needed to develop greater understanding on this important aspect of perceived economic well-being in a culturally, ethnically and economically diverse environment. In addition, further studies putting gender into consideration are needed. This is because since women do report a higher likelihood of economic adversity, it is important to determine what factors contribute to this gender difference. It also is important to study economic adversity's role in affecting perceived economic well-being and to determine if economic adversity, rather than differences in gender values, is the underlying factor affecting perceptions of economic well-being.

CONCLUSIONS

This study adds to the voice advocating for increased community participation in development, by understanding individuals' perceptions of development in their context. The study contributes to the study of development through the revised model (Figure 3) by indicating factors found to be important in the way the rural poor in a developing country context perceive development. The study adds to development studies through its analytical approach by advancing the methods that could be applied when analysing such latent factors as perception of development. This study also highlights the importance of personal, socio-economic and other factors in how the rural poor perceive participation in development, anticipated development outcomes and custodianship of development. It is clear from the results of this study that progress in the community (development) is perceived differently by men and women. This is an important finding for development researchers and students, development planners and implementers as well as policy makers who design projects to benefit communities. The study does not only emphasize the importance of employing participatory approaches in understanding poverty and development among poor communities of developing countries, but also the consideration of the various personal and socio-economic factors of the beneficiaries. Understanding the influences of perceptions of development that are unique to men and women has potential in informing approaches and development plans that can cater for the needs of both gender separately. This is likely to enhance efficiency in design of approaches for these groups when encouraging participation

in development activities. This would help improve success outcomes of development strategies and development projects implemented in rural poor communities.

This study also has potential to inform development planners, practitioners and policy makers of development on the importance of age in perceptions of personal and community participation in development, future development prospects and custodianship of development. This understanding would help incorporate the views of people of various ages in development projects that have potential to have a great and quick impact on the lives of everyone in a community, regardless of age.

In addition, since one's perceptions of household economic wellbeing also have an influence on their perceptions of community development/progress, this result point to the need to design development initiatives in a way that all members of the community, their wealth status or perceived wealth status notwithstanding, are able to participate in these initiatives. This is because sometimes, even where participatory development may be applied, the very poor may be excluded from decisions and initiatives.

These findings therefore emphasize that development plans are prioritised based on communities' felt needs, but most importantly findings of this study offer focus in understanding the factors influencing how the rural poor perceive development. Development efforts would therefore benefit from findings of this study by incorporating these findings in their plans. This study therefore emphasizes the multidimensionality of development as perceived by the study's respondents, supporting the view that development goes beyond monetary and quantitative values, even in a community where there is less economic, cultural and social variation, like the case of the community where this study was conducted, based on the wealth status, average household incomes and other measures of wellbeing including source of water. Further, the study emphasises that development is a complex concept, requiring the need to use non-specific and contextual measures to understand and plan policies focused on communities' perceptions, needs and anticipated development outcomes based on their other individual and socio-economic characteristics.

In conclusion, this study could be applied to other more culturally diverse contexts and on a larger population where the analysis can be done for men and women separately in order to improve the understanding of the factors influencing development perceptions on gender lines. The same analysis could also incorporate the views of other younger (15-17 years) and older (above 49 years for women and above 54 years for men) persons since age was a factor influencing these perceptions.

ACKNOWLEDGEMENTS

The authors thank Dr. Fifi Amoako Johnson and Dr. Gloria Langat both from the University of Southampton for reviewing earlier versions of the manuscript. They acknowledge the financial support from the Social Statistics Department of the University of Southampton and the Energy 4 Development Project (E4D) that enabled the collection of the data used in this study. The authors would also like to thank the Kitonyoni community for their participation in this research.

Notes On Contributors

Hildah Essendi and Nyovani Madise are researchers based at the Centre for Global Health, Population, Poverty & Policy (GHP3) at the University of Southampton. Hildah is a Research

student and a senior research assistant whose research interests include maternal and child health, fertility, family planning, barriers to access, health systems and development & wellbeing in developing countries. This paper is derived from her PhD research titled "Public perceptions of development, participation in development and relationship with wellbeing: the case of Makeni County in Kenya". Nyovani is a Professor of Demography and Social Statistics and Associate Dean (Research and Enterprise) at the Faculty of Social and Human Sciences. Her research interests are in child and maternal health and nutritional health in the developing world.

REFERENCES

- Bentler PM, & Bonnett DG. (1980). Significance Tests and Goodness of Fit in the Analysis of Covariance Structures. *Psychological Bulletin*, 88(3), 588-606.
- Bookwalter JT, & Dalenberg D. (2004). Subjective well-being and household factors in South Africa. *Social Indicators Research*, 65(3), 333-353.
- Byrne BM. (2010). *Structural Equation Modeling with AMOS: basic concepts, applications and programming* (2nd ed.). New York: Routledge Taylor & Francis Group.
- CBS, World Bank, SIDA, & SID. (2005). *Geographic Dimensions of Well-being in Kenya: Who and Where are the Poor? A Constituency Level Profile*. Nairobi: Government Printer.
- Chambers R. (1983). *Rural development: Putting the Last First*. Essex: Longman.
- Claude Saha, J. (2008). Reducing poverty in sub-Saharan Africa: the need for participatory governance. *Development in Practice*, 18(2), 267-272. doi: 10.1080/09614520801899192
- Essendi H, Madise N, & Matthews Z. (2014). Perceptions of development by residents of a rural community in Kenya: A capability issue. *Journal of African Studies and Development*, 6(4), 67-77.
- Hayhoe CR. (1990). *Perceived economic well-being and active participation in financial decision making*. Paper presented at the Annual conference of the association for financial counselling and planning education, Columbia, MD.
- Hayhoe CR, & Wilhelm MS. (1998). Modeling Perceived Economic Well-Being In A Family Setting: A Gender Perspective *Financial Counselling and Planning*, 9(1).
- Joreskog KG (Ed.). (1993). *Testing Structural Equation Models in Testing Structural Equation Models*, KA Bollen and JS Long, eds., pp.294-316. Newbury Park CA: Sage.
- Kanagawa M, & Nakata T. (2008). Assessment of access to electricity and the socio-economic impacts in rural areas of developing countries. *Energy Policy*, 36, 2016-2029.
- KNBS. (2010). *2009 Kenya Population and Housing Census*. Nairobi: Government Printer.
- KNBS, & ICF Macro. (2010). *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.
- Leach LJ, Hayhoe CR, & Turner PR. (1999). Factors Affecting Perceived Economic Well-being Of College Students: A Gender perspective. *Financial Counselling and Planning*, 10(2).
- Lilja, N., & Dixon, J. (2008). Operationalising participatory research and gender analysis: new research and assessment approaches. *Development in Practice*, 18(4-5), 467-478. doi: 10.1080/09614520802181202
- Nzioka C. (2000). Makeni district profile: Human resource management, 1989-1998. *Drylands Research Working Paper 9*. Retrieved from
- Porter NM, & Garman ET. (1993). Testing a Conceptual Model of Financial Well-Being. *Financial Counseling and Planning*, 4.

Table 1 Acronym definitions of variables in the model

Variable	Description/interview question	Mean (SD)/% ¹	Median
<i>Observed, endogenous variables (Scale-level data)</i>			
1. P2	Community development in this area is a responsibility of government (1.Strongly agreed 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree)	1.96 (0.72)	2
2. P3	International community has a responsibility to help in dvlpt e.g. climate (1. Strongly agreed 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree)	2.95 (1.01)	3
3. P4	How satisfied are you with the level of your personal involvement in dvlpt? (1.Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Very dissatisfied)	1.70 (0.70)	2
4. P5	How satisfied are you with the level of your community's involvement in dvlpt? (1.Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Very dissatisfied)	1.71 (0.74)	2
5. P6	How do you feel about being asked to participate in development activities? (1.Very happy 2. Happy 3. Neutral 4. Unhappy 5. Very unhappy)	1.52 (0.56)	1
6. P7	How much do you think that development in your community will improve? (1.Very much 2. Quite a lot 3. Neutral 4. Not much 5. Not at all)	1.73 (0.77)	2
7. Hgeneral	How is your health in general? Would you say it is...? (1. Very good 2. Good 3. Fair 4. Bad 5. Very bad)	2.20 (0.29)	2
8. HHWB	Position of respondent's household on a 10-step ladder where the least-developed are on step 1 while most developed on the 10 th step.	2.32 (0.04)	2
9. Wealth	If respondent's household is wealthy (2 upper wealth quintiles)	40.4%	
11. Income	Average household income in Ksh @Ksh.85=1\$	5,935.82 (5,392.25)	4,000
12. DvlptElec	Whether supply of electricity would constitute development	68.7%	
<i>Observed, exogenous variables</i>			
13. Gender	Respondent's gender (Male)	49.1%	
14. Age	Respondent's age (continuous variable)	31.17 (9.08)	30
15. Parity	Number of children (If has 1 or 2 children)	15.6%	
16. Education	If respondent had secondary or higher education	26.1%	
17. Alcohol	If respondent uses alcohol	9.8%	
18. Smoking	If respondent had ever smoked	17.1%	
<i>Unobserved, endogenous variables</i>			
19. PerDvlpt	Latent (Outcome variable) computed using P2 to P7 observed variables		
<i>Unobserved, exogenous variables</i>			
E _i	Where i corresponds to variable 1-19		

¹ The figures in bold are percentage values of the corresponding variables

Table 2 Demographic and household socio-economic characteristics of sample

Characteristic	N=276	
	n	%
Gender (Sgen)		
Male	135	49.1
Female	140	50.9
Educational status		
Pre-primary/Primary	201	73.1
Secondary+	71	26.1
Age		
18-24 years	74	26.9
25-29 years	57	20.7
30-34 years	44	16.0
35-39 years	37	13.5
40-44 years	33	12.0
45-49 years	30	10.9
Parity (number of children)		
None	60	21.8
1-2	43	15.6
3+	172	62.5
Religion		
Christian	272	98.9
Other	3	1.1
Employment status		
None	228	82.9
Self	22	8.0
Other	25	9.1
Household income (Kes)- Mean(SD)	5,935.82 (5392.25)	
Educational status		
Pre-primary	201	73.1
Primary complete	67	24.6
Secondary+	4	1.5
Missing	3	1.1
Housing material (floor)		
Natural	183	66.5
Finished	92	33.5
Source of water at household		
Well (protected)	71	25.8
Unprotected (eg surface, unprotected well)	202	73.5
Other	2	0.7

Table 3 Parameter Estimates of perceived development and independent characteristics

Parameter	Estimate	P
Wealth	0.074 (0.064)	
DvlptElec	0.044 (0.067)	
Perceived household wellbeing	-0.080 (0.042)	**
Perceived health	0.043 (0.064)	
Age	-0.006 (0.004)	*
Gender	-0.321 (0.076)	***
Education	0.064 (0.073)	
Parity	0.009 (0.088)	
Alcohol use	0.262 (0.116)	**
Smoking (ever smoked)	0.212 (0.093)	**

*p<.10

**p<.05

***p<.001

Table 4: Total (Direct & Indirect) Effects of Independent variables on perception of development

Variable	Total Effects
Age	-0.006
Parity	0.007
Education	0.074
Gender	-0.319
Wealth	0.074
Hgeneral	0.043
HHWB	-0.080
DvlptElec	0.044
Alcohol use	0.262
Smoking	0.216

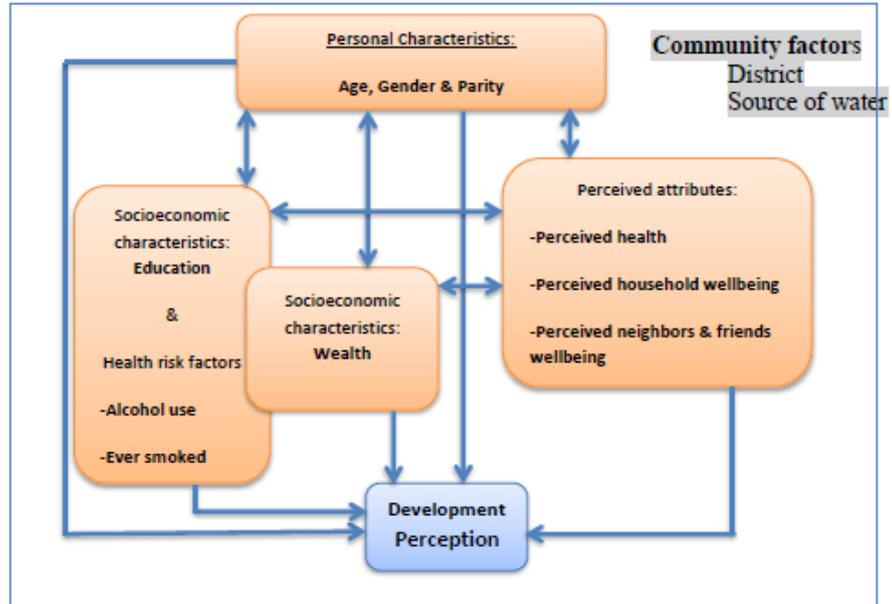


Figure 1: Model of Perceived Development (Adapted from: Porter & Garman's Conceptual Model of Financial Well-Being (Porter, NM & Garman ET, 1993))

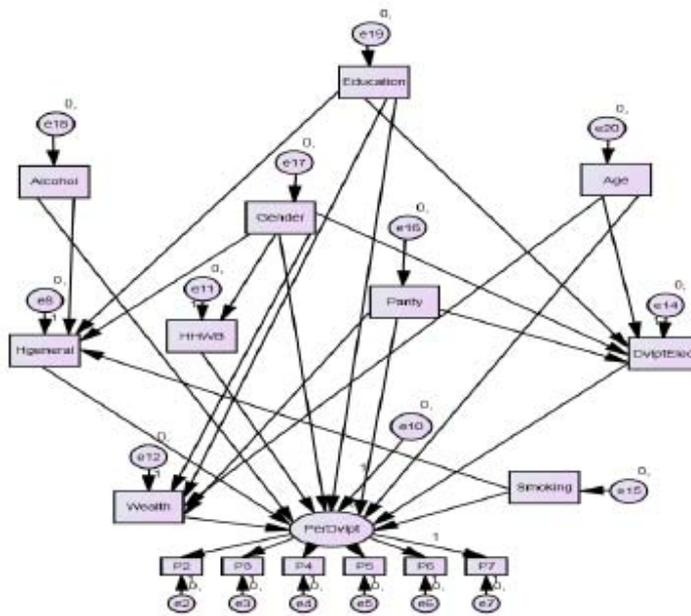


Figure 2: Model of perceived development and factors influencing perception of development

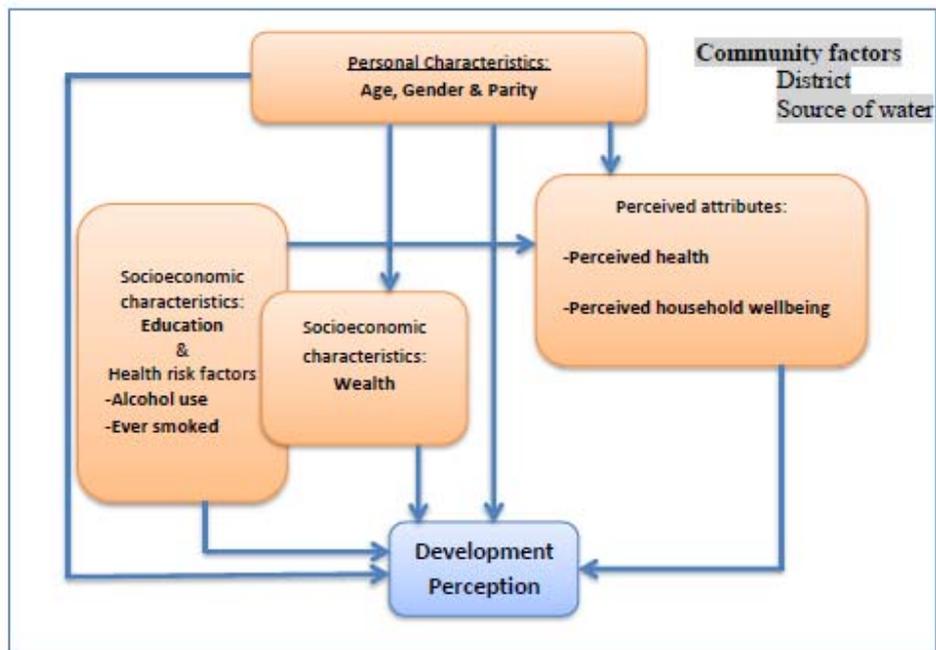


Figure 3: Revised Model of perceived development (Adopted from: Porter & Garman's Conceptual Model of Financial Well-Being (Porter NM & Garman ET, 1993)

10.3: Do perceptions of development influence fertility choices? Evidence from rural Kenya

Hildah Essendi¹¹ and Nyovani Madise¹

Abstract

Despite implementation of many development initiatives, the progress in economic development and fertility outcomes in Kenya, the situation especially for the rural poor in the country in many instances continues to fare worse than that of the urban residents. The rural residents continue to register poorer economic and fertility choices and outcomes, despite evidence indicating that improvement in fertility has potential to improve development and achievement of the millennium development goals. This paper attempts to argue towards alternative approaches to addressing poor development and wellbeing, one of which is participatory development.

Using data collected from 294 individuals from 294 households in Kitonyoni sub-location of Makueni County in Eastern Kenya, the paper seeks to assess the relationship between perceptions of development, and fertility outcomes, specifically focusing on contraception and desired fertility, while controlling for other socio-economic and demographic factors. We use binary and multinomial logistic regression analyses.

The study found the odds of using a method of contraception and desiring to have fewer children to correspond with perceptions of participation in development. Individuals viewing development as a participatory approach were significantly more likely to be using at least one method of modern contraception (OR=2.668). In addition, they were significantly more likely to desire to have fewer children; either 1-3 children (OR=2.870) or 4 children (OR=2.040) instead of desiring to have 5 or more children. The baseline total fertility rate in Makueni is 5.1 children per woman.

These findings indicate that people who view development to be a participatory activity or those who participate in development are also likely to make better fertility choices. These findings support the argument towards continued involvement of people in development initiatives as this is also likely to lead to improvement of their wellbeing. This approach could be adopted as one of the non-economic

¹¹ *Social Sciences, Faculty of Social and Human Sciences, University of Southampton. Southampton SO17 1BJ United Kingdom.*

For correspondence: Hildah Essendi, Social Sciences, Faculty of Social and Human Sciences, University of Southampton, Southampton SO17 1BJ United Kingdom. (E-mail: hildah.essendi@gmail.com). Tel +44 23 80594748; Fax +44 23 80593858.

indicators and measures of development; it can be used to both measure people's satisfaction with development initiatives as well as indirectly use it to assess the success of development initiatives geared at improving people's wellbeing.

Key words: Development, Wellbeing, Fertility, Perceptions of Development & Wellbeing, Participatory Development, Rural Kenya, Sub-Saharan Africa

Introduction

The state of world development

Although there has been significant progress in development at the global level within the last decade, there still exist inequalities on the regional front and between urban and rural areas [1-4]. Development, reflected by the achievement of the Millennium Development Goals (MDGs) shows that there has been progress, however, some pockets of the world's population are still yet to experience this progress [2]. A quarter of humanity for instance still lives on less than \$1.25 a day [4], while on the health front, a quarter of all children in developing countries are malnourished [4]. Worse still, development indicators are expected to worsen among the poorest such that, although global poverty is expected to fall by 15% between 1990 and 2015, this mainly reflects results from rapid growth in Eastern Asia, especially China and less progress in two of the poorest regions; South Asia and sub-Saharan Africa [2]. Despite the strong economic growth in most countries in the region in the last decade, an evaluation of the achievement of the MDG goals puts sub-Saharan region well behind other regions [2].

Some efforts to reverse the slow progress has seen an implementation of various approaches to enable quicker achievement of the MDGs. These have included the design and implementation of programs and initiatives targeting fertility choices and outcomes. The decision to target fertility by expanding reproductive health choices and services arises from the view that it is one of the ways to control population growth, ultimately impacts the achievement of the MDGs and overall development of the region [5]. Family size and family formation decisions resulting from poor reproductive health in the region are indeed reported to impact the slow progress in the region. For instance, 13% of maternal deaths occurring annually result from unsafe abortions, which could otherwise be addressed if better reproductive health services such as contraceptive use were available [6]. The choice to procure abortions by the 42 million women with unintended pregnancies, a half of which are unsafe, could be avoided if adequate fertility choices existed [6]. This is particularly important as a significant number of women have an unmet need for modern family planning, 29% of which are in developing countries, with the highest proportion (46%) hailing from sub-Saharan Africa [7].

An improvement in reproductive health services and choices also has potential to help meet the MDGs #1, #2 and #4 seeking to eradicate poverty and hunger; achieve universal primary education and to reduce child mortality respectively. It has been argued that smaller families can enable adequate child nutrition and investment in education, which would ultimately

enable faster social and economic development at the family, community and national levels [5]. In addition, the ability for women to have choices on their reproductive health matters has potential to promote gender equality and women empowerment (MDG #3), while at the same time improving maternal health (MDG #5) and helping combat HIV/AIDS, malaria and other diseases.

This evidence points to the need to pay more attention to fertility as population growth ultimately impacts the achievement of the MDGs, improvement of wellbeing and development in general. Uncontrolled population growth may have an effect on development through its pressure on creation of wealth at the household, community and national levels, as well as its limiting of expansion and access to education and health facilities and other opportunities, such as limiting opportunities for children's educational development [8]. Improved fertility also has potential to enable access to adequate food, water, housing, sanitation facilities as well as improvement in health and education [9]. Efforts to control fertility should therefore be stepped up in areas recording high population growth rates and poor improvement of wellbeing, such as sub-Saharan Africa.

Development and wellbeing in Kenya

Kenya is one of the countries in the region showing slow progress both in the control of its population growth as well as in its development progress. Although the country recently rebased its GDP growth for 2014, revising it from the earlier projected value of \$44.10 billion to \$56.3 billion, the other measures of social development and wellbeing are still poor [10]. Its gross national income (GNI) per capita was estimated to be US \$ 1,246 in 2013 [10], while its Human Development Index (HDI), a composite measure of three basic dimensions of human development: health, education and income was 0.535 in 2013 [11]. Consequently, the country is not only ranked 147th out of 187 countries in human development, it also faces regional inequalities in development including in infrastructure, health and education [12,13]. The country was indeed reported to have one of the highest gini co-efficients in Africa in 2009, with nearly a half of its citizens living in poverty [12]. These development inequalities go beyond the regions and are clearly pronounced between rural and urban Kenya where fertility outcomes also show inequalities, despite the implementation of various programs to reduce fertility and improve the use of contraception [5].

While the Kenyan government took several steps to improve its fertility, the results have been quite slow. The incorporation of family planning in its 1965 development agenda for instance contributed to a decline of the total fertility rate, from 8 children in 1980s to 4.7 in 1990s. These gains were however eroded when this focus and funding was shifted from fertility to other health issues, including HIV/AIDS [14]. Consequently TFR started to rise again, reaching 4.9 children per woman in 2000s, while contraceptive prevalence rate which had been increasing annually at 6% also stalled at 39% [14]. Although more efforts to improve the state of fertility in the country, including starting government departments specifically focusing on reproductive health and fertility issues have been implemented since, there are still some weaknesses in these efforts. There are some gaps in the current development policy approaches which have failed to explicitly incorporate strategies directly targeting fertility. Kenya's Vision 2030, one of the important current development strategies

which comprises a set of strategies seeking to drive the economy to a middle income status by 2030 for instance does not have plans to address population issues, yet the country's population growth rate has an implication on the achievement of the goals in this plan [14]. The other newer government policy documents and guidelines have also attempted to address these gaps, however the contribution of the community in development efforts is still missing [15]. Gender, another important factor in the success of fertility programs in the country has not been adequately incorporated in the design and implementation of these programs. Although both men and women are users of contraceptive products in the country and despite the important role that men play in decision-making regarding birth control measures, male involvement has not very prominent in decisions, opinions and perceptions regarding the products and services [16]. Yet the country's population continues to increase at an unsustainable rate which may make it difficult to achieve these development plans.

Definition of development

This background therefore points to the need to revisit development and look into alternative development approaches that have the potential to ensure equity in participation in development, a strategy that has potential to help improve development and wellbeing outcomes [17]. Considering the poor development progress not only in Kenya, but also in many countries in sub-Saharan Africa and the gaps in the development approaches implemented in these countries, this study focuses on people's involvement in development, through the seeking of their perceptions of participation in development, and links these perceptions with their fertility choices. Fertility is a key focus due to its important association with development outcomes and in the achievement of the MDGs. To achieve sustainable development and improve wellbeing as proposed by the United Nation's millennium development goals, there is need to work at reducing population growth, as well as investing in universal health care including providing adequate reproductive health services while at the same time investing in education and gender equality [18].

Given all the benefits of improved fertility highlighted in the background, this paper focuses on the relationship between perceptions of development and fertility choices, specifically contraceptive use and desired fertility. The paper lobbies for the incorporation of more non-monetary measures, indicators and approaches to development, including participatory development as this may have potential in improving people's worldview as well as enabling make better choices in regards to their fertility. We hypothesize that people perceiving development to be participatory are more likely to also have better fertility perceptions, and consequently, as well as make better fertility choices. This study adopts the definition of community perceptions of development as the empowerment and involvement of the socially and economically marginalized peoples in decision making over their own lives [17,19-21]. This definition is informed by Amartya Sen's Capability Approach where the improvement of people's capabilities through empowerment, enabling them lead better lives is viewed as a prerequisite in development and in the improvement of a people's wellbeing [20]. It is also argued that this approach has potential to promote community participation in development projects argue that this has potential to reduce communities' dependency on donor-supported programmes while understanding and making use of the communities'

resources and capacities needed to drive development on a sustainable basis [22,23]. Outcomes of such an initiative have potential to ensure that communities' views and opinions are incorporated in development plans and initiatives [21]. This study therefore seeks to assess whether perceptions of participatory development influence fertility choices, that is, contraceptive use and desired fertility.

Data and methods

Study setting

The study was conducted in Kitonyoni sub location of Kathonzweni district in Makueni County in 2012. The rural sub-location, an area covering 27.1 sq km and Density of 96 has a total population of 2,500; 1,284 males and 1,306 females [24]. Makueni County is a semi-arid area where residents traditionally depend on farming as the primary means of livelihood [25]. The sub-location and the whole of Makueni County experiences minimal rainfall between November and December which contributes to the semi-arid nature of the study area. Those engaging in farming often grow such crops as maize, beans, green grams, chickpeas, cowpeas and pigeon peas most of which are used for subsistence, while in some instances, they are grown and sold as a main income earner. Besides predominantly engaging in farming, some members of the community also practice beekeeping, small scale trade and subsistence goat, sheep and cattle farming [26]. The minimal rainfall often results in constant food shortage such that the community has to often rely on government food aid [27]. Being a semi-arid area, most of the households in the sub-location rely on water from streams, springs, wells or boreholes [28]. Only a few households in the whole County (13.1%) are connected to the country's main electricity grid while a majority (81.2%) use paraffin for lighting [29].

The sub-location is located about 27KM from the County headquarters at Wote and about 13KM from the closest town, Kathonzweni (Fig. 1). Most residents of the community travel to either of the two towns for important purchases, businesses and to access referral health services from Makueni County hospital and Kathonzweni district hospital. As 95% of the roads in the community are untarred, the community is mainly served by dusty roads. The main means of transportation within the community are motorcycle taxis, while commutes to the two towns are done using mini buses which operate twice daily, in the mornings and evenings. The sub-location is not connected to the country's main electricity grid and households mainly rely on paraffin for lighting and firewood for cooking. There is no piped water serving homes and community members rely on water from boreholes, streams, rain and shallow wells. Access of health care is also challenging as the community is served by one level-5 dispensary which can only provide basic outpatient services. The contraceptive choices available from this facility are limited to pills and injectables, while those requiring storage in cold chains and surgical procedures to administer can only be accessed from Makueni and Kathonzweni facilities. Like the rest of the sub-location, the facility is not connected to the country's main electricity grid. As a consequence of the difficult livelihoods

and access of important infrastructure, health outcomes in the County are poor such that 41.9% of children aged below 5 years are stunted [30].

Fig. 1. Map showing study site and nearby towns

Development in the sub location is now handled by the county government of Makueni. This followed the enactment of the new constitution where the governance system was devolved. Consequently, various development projects focusing on improving access to safe water, roads, health facilities, education, farming methods and information communication & technology have been undertaken by Makueni County government [31]. Some projects, for instance, those on fertility and reproductive health are implemented in collaboration with some non-governmental organizations. The focus on the County's fertility is especially important as it has one of the highest fertility rates in the country. Makueni County's fertility rate is 5.1 children per woman compared to the national figure of 4.6, while its contraceptive use is still quite slow, at 40% [32].

Data

The study uses individual and house-level data collected from a sample of 275 of the 487 households in Kitonyoni sub-location. Within the sampled households, a male and female were selected and interviewed in each household alternately, making a total sample of 150 men and 144 women. These respondents were aged between 18 and 49 years for women and 18 and 54 years for men. Questions were asked on household economic status, respondent's education level, parity, contraception, perceived health, perceived household wellbeing and perceived development. The analysis in this paper comprises 294 respondents; 150 men, 144 women (Table 1). Ethical approval of the study was obtained from the University of Southampton's School of Social Sciences Ethics Committee and from the Kenya National Council for Science and Technology (NCST). Informed written consent was obtained from participants before the discussions were held. Before consent was given, information on the study, including the procedures to be followed, any risks and benefits and confidentiality assurance was read to the participants. Those who agreed to participate in the study were asked to sign the consent form and an information sheet for further reference given to them. Both the university and the Kenyan ethics bodies approved this consent procedure

Table 7.1: Demographic, socio-economic and health characteristics of respondents (18-54 years)

Characteristic	N=294		Description
	n	%	
Socio-demographic factors			
Sex			
Male	150	51.0	Dichotomous variable of males (18-54 yrs.) and female (18-49 yrs.) adult respondents
Female	144	49.0	
Age of respondent			
18-24 years	76	26.0	Adult respondent's age categorised into 10 year age groups, except the 18-24 age group. The last group was either 45-49 years for female respondents or 45-54 for males
25-34 years	101	34.6	
35-44 years	70	24.0	
45+ years	45	15.4	
Socio-economic factors			
Educational status			
Pre-primary/Primary	215	74.9	The highest education level attained coded as; <i>pre-primary/ primary</i> and <i>secondary+</i>
Secondary+	72	25.1	
Employment status			
Employed	28	9.6	Respondents were asked who their employer was and responses categorised into; <i>Employed, None & Self</i>
Self	23	7.9	
None	241	82.5	
Household income			
<Kes 5,000	77	26.2	Household income was categorised into; <Kes 5,000, Kes. 5,000-9,999 & Kes. 10,000+
Kes 5,000-9,999	104	35.4	
Kes 10,000+	113	38.4	
Source of water at household			
Protected (e.g. protected well)	75	25.5	Type of source for drinking water, categorised into protected & unprotected at the analysis stage
Unprotected (eg surface, unprotected well)	219	74.5	
Fertility factors			
Parity (number of children)			
None	63	21.4	Number of children ever born to the respondent. At analysis stage these were grouped into; <i>None, 1-3</i> and <i>4+ children</i>
1-3 children	86	29.3	
4+ children	145	49.4	
Desired fertility			
1-3 children	60	20.4	Number of children desired by the respondent. At analysis stage, these were grouped into; <i>1-3 children, 4children</i> and <i>5+ children</i>
4 children	141	48.0	
5+ children	93	31.6	
Contraceptive use	217	73.8	Use of any birth control method

Methods of data analysis

This paper employs cross-sectional quantitative data analysis given the cross-sectional nature of the data. The first quantitative analysis is descriptive statistics, used to assess the distribution, frequency of responses and the range of values for all the variables used in the study. The study also employs bivariate analysis to investigate the relationship between the variables of interest in the paper. In the bivariate analysis used in this paper, chi-square test is used to assess the independence of these variables. This paper also uses logistic regression to assess the relationship between the predictor and outcome variables. Logit models are fitted to assess the relationship between perception of development and contraception use, a binary variable. The study also employs the multinomial logistic regression to assess the relationship between perception of development and desired fertility, a nominal variable with three categories.

Measurement of perception of development (main predictor variable)

This study’s main predictor variable is the perception of development, measured using three questions/statements administered in the study and which refer to the respondent’s perception of participation in development. The question administered was “What does development mean to you?” to which three of the responses directly relating to perception of participation in development and which sought spontaneous responses (1. Yes 0. No) were used in this analysis. The responses are: ‘development entails involving women in leadership’; ‘development entails involving everyone in development’ and ‘people in the community are normally involved in community development’. Using factor analysis, these three variables were used to compute a perception of development index that depicts perceptions of participation in development activities (Tables 2 and 3). Logistic regression was then run where this index was assessed against the main outcome variables in this study, that is, use of contraception and desired fertility.

Table 2: Total Variance of perception of development index explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.261	42.041	42.041	1.261	42.041	42.041
2	1.003	33.420	75.461	1.003	33.420	75.461
3	.736	24.539	100.000			

*1= Development entails involving women
 2= Development is involving everyone

Table 3: Factor loadings and communalities of perception of development index

	Component	
	1	2
Development entails involving women	-.128	.983
Development is involving everyone	.782	.186
People in the community are normally involved in development matters	.796	-.025

Other explanatory variables

Table 1 gives a description of the variables used in the analysis and their frequency distributions.

Outcome (dependent) variable in the analysis

This paper comprises 2 main outcome predictors of fertility; contraceptive use and desired fertility.

Contraceptive use: This variable referred to use of any modern or traditional means of birth control. The modern methods include combined or progestogen only oral contraceptives (or the pill), combined or progestogen only injectables, implants, Intrauterine copper or

hormonal devices, male and female condoms, male (vasectomy) and female (tubal ligation) sterilization, lactational amenorrhoea method and emergency contraception [33]. Contraception is a binary variable, categorised into 1. *Yes*, if any modern method of contraception was used and 0. *No* if no method of contraception was used.

Desired fertility: This was defined as the reported number of children that a respondent desired to have. This applied both to those with and without children. Those with children were asked to give their initial desired number of children before the start of their child-bearing. This variable was categorised into three; *1-3 children*, *4 children* and *5+ children*. No respondent indicated desire not to have any children.

Results

Descriptive statistics

Predictor variable

Principle components analysis was used to compute the perception of development index. Table 2 presents the eigenvalues, which shows that the first factor explained 42% of the variance, the second factor 33% of the variance, and a third factor 25% of the variance. Further, Table 3 presents the index's factor loading matrix and communalities. This perception of development index was used to compute a histogram with age and gender (Figs. 2 and 3). These histogram show a distribution slightly skewed towards the left, showing that a slight majority of respondents viewed development as non-participatory. Further, there exist a few outlier values in both gender and age relations with the index.

Fig. 2. Histogram of perception of development and gender

Fig. 3. Histogram of perception of development and age

The first part of the analysis presents results of descriptive statistics of the various wellbeing factors in the analysis, including a description of the variables and the frequency distribution of the accompanying responses.

Explanatory variables

The variables are categorised into three; *socio-demographic factors*, *socio-economic factors* and *health factors (outcome variables)*. The two socio-demographic factors used in this analysis are sex and age while educational attainment, household income, employment status and source of water for drinking at the household were the main socio-economic factors used in this analysis, as they have been found to influence fertility [34].

The distribution of adult respondents by gender was almost equal, while a majority of adult respondents were between 18 and 34 years. Less than a third of the population (25.1) had acquired either a secondary education or higher with even fewer heads of households (17.2%) having attained this level of education. The mean household monthly income was about Kes.

5,935.82 (1£=Kes. 130) which was much lower the country's average of Kes. 17,172 and rural Kenya's Kes. 10,055 [35]. Only 25.5% of households used a protected source of drinking water such as protected wells.

Regarding the description of the fertility indicators, about 50% of the adult respondents reported a desire to have 4 children but an almost equal number actually had more, that is, 4 or more while less than a third of the population (26.2%) reported not using any method of birth control.

Results of the regresssion analyses

Contraceptive use

This study hypothesised that perceptions of participatory development have an association with better fertility choices, specifically use of contraception and the desire to have fewer children. Table 4 presents the odds of using any method of contraception when holding perceptions of participatory development, based on the perception index computed. This relationship is highly significant. The study finds the odds of using a method of contraception to be high with an improvement in the perception of development (OR=2.668). These odds increase further when demographic, socio-economic and fertility factors are controlled for in the model (OR=3.036). With the exception of parity, none of these additional variables were significant in the use of contraception. Female respondents however had higher odds of using contraception (OR=1.000 vs. OR=0.775 for men). The odds of using contraception reduced with age (OR=0.995) while married respondents were more likely to use contraception compared to the unmarried (OR=1.171 compared to OR=1.000 for unmarried respondents).

Table 4: Results of logistic regression analysis on the effects of perception of development on the use of contraception

Determinants	Model With Perception Only		Full Model	
	Odds ratios	P-value significance	Odds ratios	P-value significance
Intercept	2.861	***	3.465	
Perception of development	2.668	***	3.036	**
Socio-demographic factors				
Sex (Ref: Female)			0.775	NS
Age			0.995	NS
Married			1.171	NS
Socio-economic characteristics				
Education level (Ref: Primary)			1.629	NS
Use of protected source of water at the household			5.999	NS
Household income			2.237	NS
Parity (Ref: No child)				
1-3 children			1.116	***
4+ children			1.402	***
Model χ^2			66.239	
Df			9	
p-value			0.000	
N			294	
R ²			0.304	

Significance levels *** <0.001; ** <0.01; * <0.05 NS- Not significant

Regarding the influence of socio-economic factors, those with primary education were less likely to use contraception compared to those with secondary or higher (OR=1.629 compared to the OR=1.000 for those with secondary education). Income had a big influence on whether respondents used contraception. For every unit increase in income (Ksh.), the odds of using contraception increased (OR=2.237). Those using a protected source of water at the household were about six times more likely to use contraception at OR=5.999.

When parity was considered, respondents who had ever had a child were more likely to use contraception compared to those without any child. Those who had between 1 and 3 children were about as likely to use contraception as those without (OR=1.116 vs. OR=1.000) while those with 4 or more children were about one and a half times more likely to use contraception compared to those without any child (OR=1.402).

Desired fertility

Multinomial logistic regression to assess the effects of perception of development on desired fertility was done using the multinomial logit model in IBM SPSS version 20. The choice to use multinomial logistic regression was made because the outcome variable (desired fertility)

was grouped into three categories: desire to have 1-3 children; desire to have 4 children and desire to have 5 or more children. The baseline fertility is 5+ children.

This analysis uses desired fertility instead of achieved fertility because 21.4% of the respondents in the study had no children (Table 1). In addition, desired fertility gives a better perception of the estimated desired number of children because this information is easy to interpret and it also impacts fertility outcomes [36]. In addition, about 50% of respondents indicated 4 as the desired number of children, hence the three categories. The regression model compares the multinomial logistic regression results of those who desired to have either 1-3 children or 4 children with those who desired to have more than 4 children (Table 5). Respondents who perceived development to be participatory were significantly about 3 times more likely to desire to have 1-3 children as opposed to 5 or more children (OR=2.981). Similarly those viewing development as a participatory process were about two times likely to desire to have 4 children instead of 5 or more children (OR=2.186). In addition, among those respondents with perceptions of participating in development, women were more likely to desire to have fewer children than men; (OR=1.777) desiring to have 1-3 children and OR=2.034 desiring to have 4 children. Younger respondents were also significantly more likely to desire fewer children compared to older respondents. The unmarried respondents were significantly more likely to desire to have 1-3 children and not 5 or more (OR=4.460) compared to the married ones. Although not significant, the pattern was the same for those desiring to have 4 children as opposed to 5 or more children, whose odds ratio was 2.482. The odds of desiring to have 1-3 children compared to 5 or more did not vary greatly by education (OR=1.094 for those with primary education vs. OR=1.000 for those with secondary education). This however changed in regards to the desire to have 4 children as opposed to 5 or more children, where those with primary education were less likely to desire to have fewer children (4 children compared to 5 or more children). Respondents from households with higher monthly income were more likely to desire to have 1-3 children as opposed to 5 or more (OR=1.000 for those whose income is More than Kes. 10,000, and OR=1.036 for those with income ranging between Kes. 5,000 and Kes. 9,999). There was little variation in the odds of desiring to have 4 children (OR=0.940) compared to 5 or more children based on the source of drinking water at the household. Respondents using contraception were more likely to desire to have fewer children compared to those not using any modern form of birth control method. The odds of desiring to have 1-3 children as opposed to 5 children was 0.548 while those of desiring to have 4 children as opposed to 5 or more was 0.680.

Table 7.2: Results of multinomial logistic regression analysis on the effects of perception of development on desired fertility

Determinants	Odds Ratio	95% Confidence Intervals for Odds Ratio		
		P-value significance	Lower	Upper
Odds of having 1-3 children vs. 5+ children				
Intercept		***		
Perception of participatory development	2.981	**	1.274	6.973
Socio-demographic factors				
Sex (Ref: Male)	1.777	NS	0.811	3.895
Age (Ref: 45+ years)	1.000			
18-24 years	9.218	***	2.422	35.085
24-34 years	3.773	*	1.057	13.466
35-44 years	4.393	*	1.171	16.485
Marital status (Ref: Married)	1.000			
Unmarried	4.460	*	1.076	18.476
Socio-economic characteristics				
Education level (Ref: Secondary)	1.000			
Primary	1.094	NS	0.443	2.700
Household income (Ref: Kes. 10,000+)	1.000			
<Kes. 5,000	0.937	NS	0.358	2.449
Kes. 5,000-9,999	1.036	NS	0.445	2.412
Use of water at household (Ref: unprotected)	1.000			
Protected water source	1.353	NS	0.578	3.169
Other factors				
Use of contraception (Ref: Used contraception)	1.000			
No contraception used	0.548	NS	0.170	1.763
Odds of having 4 children vs. 5+ children				
Intercept		NS		
Perception of participatory development	2.186	*	1.060	4.509
Socio-demographic factors				
Sex (Ref: Male)	2.034	*	1.078	3.839
Age (Ref: 45+ years)	1.000			
18-24 years	4.579	**	1.693	12.386
24-34 years	2.919	*	1.212	7.029
35-44 years	3.234	*	1.306	8.009
Marital status (Ref: Married)	1.000			
Unmarried	2.482	NS	0.755	8.164
Socio-economic characteristics				
Education level (Ref: Secondary)	1.000			
Primary	0.662	NS	0.325	1.348
Household income (Ref: Kes. 10,000+)	1.000			
<Kes. 5,000	1.179	NS	0.555	2.506
Kes. 5,000-9,999	0.808	NS	0.404	1.617
Source of water at household (Ref: unprotected)				
Protected water source	1.000			
Other factors	0.940	NS	0.488	1.810
Use of contraception (Ref: Used contraception)				
No contraception used	1.000			
	0.680	NS	0.278	1.665
Significance levels *** <0.001; ** <0.01; * <0.05; NS-Not Significant				
Model χ^2		44.59		
Df		12		
p-value		0.003		
N		294		
R ²		0.169		

Discussion

The study found perceptions of participation in development to be positively associated with both contraceptive use and desired fertility. Respondents who viewed development to be participatory were found to be using at least one method of contraception. These respondents were also more likely to have fewer children (4 children or less) compared to those who did not view development as a participatory approach. Based on the predictor variable, these findings emphasize the importance attached to participatory development, whose initial step is to understand people's perceptions of development and then involve them in development activities designed for them. These findings show that those perceiving development to be a participatory process where everyone, including women are involved in development make better choices in relation to their fertility. They are most likely to use contraception and also to desire to have fewer children. This approach to development is yet to be undertaken in development and wellbeing studies although it has been incorporated in other fields of study, including health, environmental and agricultural research [37-44]. More specifically, this approach is yet to be applied in assessing the relationship between perception of development and fertility decisions.

Despite this approach rarely being used in these studies and interventions, the findings of the present paper emphasize the importance of considering alternative approaches to development, as this has potential in enhancing the general improvement of wellbeing, as well as the meeting of MDGs. This study shows that involvement of people in the determination of their development needs and assessing how these relate with their fertility choices can greatly help improve not only fertility outcomes, but also ultimately, development and other wellbeing outcomes, and hence meet the MDGs. These results are timely for sub-Sahara Africa where fertility remains high, pointing to the need to step up efforts and if possible look into alternative approaches to address this. This finding corroborates the total fertility rate reported in the region whose average for 2005–2010 exceeded 5.1 births per woman [36]. Although the national average for Kenya (4.6 children per woman) is lower than this reported desired fertility, this varies by region and efforts are needed to expand and equalize fertility reduction countrywide. In addition, although the trends for desired children in Kenya has decreased over the last three decades, from more than 7 children to less than 4 [30], this decline has stalled, calling for more effort to be stepped up if these gains are to be maintained. Population experts recommend a focus on addressing desired fertility if the goal to change the high fertility in sub-Saharan Africa region to replacement level is to be achieved [36].

Results of this study emphasize the importance of prioritizing and enacting population policies by governments in the region in order to reverse the stall in fertility decline being experienced in a majority of countries in the region [45,46]. This is urgent since population/fertility policies have previously been relegated to the periphery, yet to advance development and feel the gains of these efforts, lower fertility in the region will have to be achieved [18]. One of the areas of focus should be on reducing parity progression. Even

most important, is the incorporation of both women and men since this study found women to be significantly more likely to desire to have fewer children than men, yet in reality, they may not be the decision-makers in eventual determination of their attained fertility. Although policies incorporating men in family planning programmes in various settings in the region are being undertaken [47-49], these need to be stepped if more progress in changes in fertility is to be experienced. Indeed efforts to address fertility would have better results if both men and women are involved since in the region, men are considered to be the main decision-makers on family size, access to care and contraception [50]. Implementation of these efforts is even more urgent since a majority of the respondents in this study still desire to have many children (48.4% and 31.7% of respondents were found to desire to have 4 and 5+ children respectively), indicating the need to have awareness programs, accompanied by policies and programmes that can ensure adequate supply and access of contraception in place.

Further, since contraceptive use and fertility determinants span the socio-economic and other aspects of lives such as education and poverty, there is need to focus not only on economic, but on social advancement as well, if the uptake of contraception and reduction in the desire to have large families is to be achieved [36,51,52]. Indeed poverty and low educational achievement in the region are some of the leading factors promoting the desire for many children, who are perceived to be important in cushioning families in times of need [36]. This demonstrates how inter-twined development and fertility are both in causes and outcomes, making the focus on both a priority.

Conclusion

This study investigated the relation between perceptions of development and fertility, specifically contraceptive use and desired fertility. These two factors have been considered to be important in wellbeing and in development whereby reduced fertility impacts and is also impacted by development or lack of it (poverty) [18,53,54]. Some of the benefits of reduced/controlled fertility include increased education and empowerment for women, averting unintended pregnancies, increasing birth spacing, improved maternal and child health, thereby improving livelihoods and ultimately economic development [18]. Despite this link between fertility and development, countries with high population have the lowest contraception rates and most are the least developed, implying that the uncontrolled population puts a huge strain on their already deprived services, resources and opportunities [55]. Results of this study therefore highlight the importance of giving development beneficiaries, especially the rural populations, a platform to participate in development initiatives, thereby refocusing development priorities from the perspectives of the non-rural, most of who determine the development initiatives for the rural populace [23], as the benefits on wellbeing are highly likely to occur. The results show that if people are involved in development initiatives designed for them, they are more likely to register better wellbeing decisions, choices and outcomes. This approach can thus be adopted as one of the non-economic approaches to development which has potential to measure people's satisfaction

with development initiatives as well as enable the assessment of the success of development initiatives on the improvement of wellbeing.

The proposed perception of development index can be used by agencies involved in development and fertility programs to monitor both development initiatives and assess the progress of programs focused on reducing fertility and increasing contraceptive use. This approach is therefore best applied when assessing both development perceptions and other outcomes, while assessing community satisfaction and success of these initiatives.

References

1. UNDP (2010) Human Development Report 2010. New York: United Nations Development Programme.
2. United Nations (2011) The Millennium Development Goals Report 2011. Geneva: United Nations.
3. World Bank (2000) World Development Report 2000/2001: Attacking Poverty Opportunity, Empowerment, and Security Washington, DC: The World Bank.
4. World Bank (2010) World Development Report 2010. New York: The World Bank.
5. UNDP (2005) Population, Reproductive Health and the Millennium Development Goals. Washington DC: United Nations Development Programme (UNDP).
6. Haddad LB, Nour NM (2009) Unsafe Abortion: Unnecessary Maternal Mortality. *Reviews In Obstetrics & Gynecology* 2: 122-126.
7. MacQuarrie KLD (2014) Unmet Need for Family Planning among Young Women: Levels and Trends. Available online at: <http://dhsprogram.com/pubs/pdf/CR34/CR34.pdf> <Accessed on 02 december 2014> Rockville, Maryland, USA ICF International.
8. UNDP (2005) Population, Reproductive Health and the Millennium Development Goals: Messages from the UN Millennium Project Reports 2005. Washington DC: United Nations Development Programme.
9. United Nations (2012) The Millennium Development Goals Report 2012. New York: United Nations.
10. World Bank (2014) GNI per capita (current US\$). <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.
11. UNDP (2011) Human Development Report 2011. United Nations Development Programme.
12. World Bank (2009) Kenya Poverty and Inequality Assessment. The World Bank.
13. CBS, World Bank, SIDA, SID (2005) Geographic Dimensions of Well-being in Kenya: Who and Where are the Poor? A Constituency Level Profile. In: Central Bureau of Statistics Ministry of Planning and National Development, editor. Nairobi: Government Printer.
14. Republic of Kenya (2007) Kenya Vision 2030: Kenya's long-term national planning strategy. In: Ministry of Planning and National Development, editor. Nairobi: Government Press.
15. NCPD (2013) Kenya Population Situation Analysis. Nairobi: National Council for Population and Development and United Nations Population Fund Kenya Country Office.
16. Omondi-Odhiambo (1997) Men's Participation in Family Planning Decisions in Kenya. *Population Studies* 51: 29-40.
17. Chambers R (2005) Ideas for Development. London: Earthscan.
18. UNFPA (2013) Linking population, poverty and development <<http://www.unfpa.org/pds/poverty.html>> Accessed December 21 2013. United Nations Population Fund.
19. Guijt I, Shah MK (1998) Waking up to power, conflict and process. In: Guijt I, Shah MK, editors. *The Myth of Community: Gender Issues in Participatory Development*. London: Intermediate Technology Publications.

20. Sen A (1999) *Development as Freedom*. Oxford: Oxford University Press.
21. Kingsbury D, Remenyi J, McKay J, Hunt J (2004) *Key Issues in development*. Basingstoke: Palgrave Macmillan.
22. Chambers R (1981) Rural Poverty Unperceived: Problems and Remedies. *World Development* 9: 1-19.
23. Chambers R (1983) *Rural development: Putting the Last First*. Essex: Longman.
24. KNBS (2010) 2009 Kenya Population and Housing Census. In: Kenya National Bureau of Statistics, editor. Nairobi: Government Printer.
25. Nzioka C (2000) Makueni district profile: Human resource management, 1989-1998. Drylands Research Working Paper 9. Somerset.
26. Oxfam (2006) *delivering the agenda*, Oxfam International briefing paper.
27. GOK (2006) *Agricultural Annual Report, Makueni District-2006*. Government of Kenya. Ministry of Agriculture, Livestock and Fisheries, Makueni.
28. Republic of Kenya (2011) *County Data Sheet: Makueni*.
29. Republic of Kenya (2011) *Availability of Energy Sources, by County*. Kenya Open Data.
30. KNBS, ICF Macro (2010) *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.
31. Mzalendo (2014) *Projects in Makueni*. Available online at: <http://info.mzalendo.com/projects/in/makueni/> <Accessed on 06 December 2014>.
32. KNBS, UNICEF (2008) *Multiple Indicator Cluster Survey; Monitoring the situation of children and women*. Kenya Eastern Province, Makueni District. Kenya National Bureau of Statistics and United Nations Children's Fund.
33. World Health Organization (2013) *Family planning* <<http://www.who.int/mediacentre/factsheets/fs351/en/>> Accessed December 21 2013.
34. Bongaarts J (1978) A Framework for Analyzing the Proximate Determinants of Fertility. *Population and Development Review* 4: 105-132.
35. KNBS (2007) *Kenya Integrated Household Budget Survey-2005/06* Nairobi: Kenya National Bureau of Statistics.
36. Bongaarts J (2011) Can Family Planning Programs Reduce High Desired Family Size in Sub-Saharan Africa? *International Perspectives on Sexual and Reproductive Health* 37.
37. Dey J (1982) Development Planning in The Gambia: The Gap between Planners'and Farmers' Perceptions, Expectations and Objectives *World Development* 10: 377-396.
38. Peel JDY (1978) Qlaju: A Yoruba concept of development. *Journal of Development Studies* 14: 139-165.
39. Pigg SL (1992) Inventing Social Categories through Place: Social Representations and Development in Nepal *Comparative Studies in Society and History* 34: 491-513.
40. Behrman JR, Kohler H, Watkins SC (2003) *Social Networks, HIV/AIDS and Risk Perceptions*. Penn Institute for Economic Research (PIER). Philadelphia, PA: Department of Economics: University of Pennsylvania.
41. Newby KV, Wallace LM, DP F (2012) How do young adults perceive the risk of chlamydia infection? A qualitative study. *British Journal of Health Psychology* 17: 144-154.
42. French DP, Cooke R (2012) Using the theory of planned behaviour to understand binge drinking: The importance of beliefs for developing interventions. *British Journal of Health Psychology* 17.
43. Nfotabong-Atheull A, Din N, Koum LGE, Satyanarayana B, Koedam N, et al. (2011) Assessing forest products usage and local residents' perception of environmental changes in peri-urban and rural mangroves of Cameroon, Central Africa. *Journal of Ethnobiology and Ethnomedicine* 7.
44. Zulu E, Chepngeno G (2003) Spousal communication about the risk of contracting HIV/AIDS in rural Malawi. *Demographic Research* Vol. I, Article XI: www.demographicresearch.org.

45. Ezeh AC, Mberu BU, Emina JO (2009) Stall in fertility decline in Eastern African countries: regional analysis of patterns, determinants and implications. *Philosophical Transactions of the Royal Society B: Biological Sciences* 364: 2991-3007.
46. Sahn DE, Stifel DC (2003) Progress Toward the Millennium Development Goals in Africa. *World Development* 31: 23-52.
47. Rusatira JC, Kyamanywa P (2013) Men and Family Planning in Rwanda: What Affects the Integration of Men in Family Planning? Measure Evaluation WP-12-132.
48. Bayray A (2012) Assessment of male involvement in family planning use among men in south eastern zone of Trigay, Ethiopia. *Scholarly J Med* 2: 1-10.
49. Kim YM, Marangwanda C, Kols A (1996) Involving Men in Family Planning: The Zimbabwe Male Motivation and Family Planning Method Expansion Project, 1993-1994 [IEC Field Report Number 3]. Baltimore, MD, USA: Johns Hopkins School of Public Health, Center for Communication Programs.
50. Drennan M (October 1998) Reproductive health: new perspectives on men's participation. Baltimore: Johns Hopkins School of Public Health, Population Information Program.
51. Notestein F (1945) Population - the long view. In: Schultz TW, editor. *Food for the World*. Chicago: Chicago University Press.
52. Notestein F (1953) Economic problems of population change. *Proceedings of the Eighth International Conference of Agricultural Economists*. London: Oxford University Press. pp. 13-31.
53. Todaro MP, Smith SC (2006) *Economic Development*.
54. Ray D (1998) *Development Economics*. Princeton, New Jersey: Princeton University Press.
55. United Nations (2013) Population, Development and the Environment 2013. Accessed on March 06 2014 at <<http://www.un.org/en/development/desa/population/publications/development/pde-wallchart-2013.shtml>>. New York: Population Division, Department of Economic and Social Affairs, United Nations.

List of References

- ACC/SCN. (1997). Papers from the SCN 24th Session Symposium in Kathmandu *March ACC/SCN Symposium Report, Nutrition Policy Paper. Nutrition and Poverty*. Geneva: World Health Organization (WHO).
- ACC/SCN. (2004). Fifth Report on the World Nutrition Situation Nutrition for Improved Development Outcomes: UN Standing Committee on Nutrition, Geneva, in collaboration with the International Food Policy Research Institute, Washington.
- Adair, L. S., & Guilkey, D. K. (1997). Age-specific determinants of stunting in Filipino children. *Journal of Nutrition*, 127, 314-320.
- Adam, C. S., Collier, P., & Ndung'u, N. (Eds.). (2010). *Kenya Policies for prosperity*. Oxford: Oxford University Press.
- Ahenkora, K. (1999). The contribution of older people to development: the Ghana case: HelpAge International/HelpAge Ghana/DfID.
- Ahlburg, D. A., Kelley, A. C., & Mason, K. O. (Eds.). (1996). *The Impact of Population Growth on Well-being in Developing Countries*. Berlin: Springer.
- Akech, M. (2010). Institutional Reform in the New Constitution of Kenya: International Center for Transitional Justice (ICTJ).
- Akwara, P., Madise, N. J., & Hinde, A. (2003). Perception of risk of HIV/AIDS and sexual behaviour in Kenya. *Journal of Biosocial Science*, 35(3), 385-411.
- Alkire, S., Roche, J. M., & Sumner, A. (2013). Where Do the World's Multidimensionally Poor Peoples Live? *Oxford Poverty & Human Development Initiative (OPHI) Working Paper, No. 61*.
- Alwy, A., & Schech, S. (2007). Ethnicity, Politics, and State Resource Allocation: Explaining Educational Inequalities in Kenya. *Springer International Handbooks of Education*, 19(1), 129-144.
- Asian Development Bank. (2004). Effectiveness of Participatory Approaches: Do the New Approaches Offer an Effective Solution to the Conventional Problems in Rural development Projects? Operations Evaluation Department: Asian Development Bank. *SST: REG 2005-1*
- Bahemuka, J., Nganda, B., Nzioka, C., Gakuru, O., & Njeru, E. (1998). Analysis and Evaluation of Poverty in Kenya. In Bahemuka J, Nganda B & Nzioka C (Eds.), *Poverty Revisited: Analysis and Strategies Towards Poverty Eradication in Kenya* Nairobi: Ruaraka Printing Press.
- Baran, P. (1957). *The Political Economy of Growth*. New York: Monthly Review Press.
- Barnes, D. F. (1988). *Electric power for rural growth: How electricity affects rural life in developing countries*. Boulder: Westview Press.
- Barrett, C. B., Carter, P. M. C., & Little, P. D. (2006). Understanding and reducing persistent poverty in Africa: introduction to a special issue. *Journal of Development Studies*, 42(2), 167-177.
- Barrientos, A., & Hulme, D. (2008). *Social Protection for the Poor and Poorest*. Houndmills, Basingstoke: Palgrave Macmillan.
- Bayray A. (2012). Assessment of male involvement in family planning use among men in south eastern zone of Trigay, Ethiopia. *Scholarly J Med*, 2(2), 1-10.
- Beard, V. A. (2007). Household Contributions to Community Development in Indonesia. *World Development*, 35(4), 607-625. doi: <http://dx.doi.org/10.1016/j.worlddev.2006.06.006>
- Behrman, J. R., Kohler, H., & Watkins, S. (2003). Social Networks, HIV/AIDS and Risk Perceptions. *Penn Institute for Economic Research (PIER), PIER Working Paper 03-007*. Retrieved from
- Bentler, P. M., & Bonnett, D. G. (1980). Significance Tests and Goodness of Fit in the Analysis of Covariance Structures. *Psychological Bulletin*, 88(3), 588-606.
- Bernstein, H. (1971). Modernisation Theory and the Sociological Study of Development. *Journal of Development Studies*, 7(2), 121-151.

- Binns, T., & Nel, E. (1999). Beyond the development impasse: the role of local economic development and community self-reliance in rural South Africa. *The Journal of Modern African Studies*, 37(03), 389-408. doi: doi:null
- Biswas-Diener, R., & Diener, E. D. (2001). Making the Best of a Bad Situation: Satisfaction in the Slums of Calcutta. *Social Indicators Research*, 55(3), 329-352. doi: 10.1023/a:1010905029386
- Black, R. E., Morris, S. S., & Bryce, J. (2003). Where and Why are 10 million children dying every year? . *Lancet*, 361, 2226-2234.
- Blaug, M. (1972). Correlation between education and earnings. *Higher Education*, 1(1), 53-76.
- Bocquier, P., Madise, N. J., & Zulu, E. M. (2011). Is There an Urban Advantage in Child Survival in Sub-Saharan Africa? Evidence From 18 Countries in the 1990s. *Demography*, 48, 531-558. doi: DOI 10.1007/s13524-011-0019-2
- Bongaarts, J. (1978). A Framework for Analyzing the Proximate Determinants of Fertility. *Population and Development Review*, 4(1), 105-132. doi: 10.2307/1972149
- Bongaarts, J. (2011). Can Family Planning Programs Reduce High Desired Family Size in Sub-Saharan Africa? *International Perspectives on Sexual and Reproductive Health*, 37(4).
- Bookwalter, J. T., & Dalenberg, D. (2004). Subjective well-being and household factors in South Africa. *Social Indicators Research*, 65(3), 333-353.
- Bourdieu, P. (1986). The forms of capital. In: Richardson J (ed). Handbook of theory and research for the sociology of education. New York: MacMillan.
- Bristor, J. M., & Fischer, E. (1993). Feminist Thought: Implications for Consumer Research. *Journal of Consumer Research*, 19(4), 518-536. doi: 10.2307/2489438
- Brock, K. (1999). *It's not only wealth that matters-it's peace of mind too: A Review of Participatory Work on Poverty and Illbeing*. Paper presented at the Consultations with the Poor: Global Synthesis Workshop, Washington DC.
<http://siteresources.worldbank.org/INTPOVERTY/Resources/335642-1124115102975/1555199-1124138742310/ngorev.pdf>
- Brockerhoff, M., & Brennan, E. (1998). The Poverty of Cities in Developing Regions. *Population and Development Review*, 24(1), 75-114. doi: 10.2307/2808123
- Byrne, B. M. (2010). *Structural Equation Modeling with AMOS: basic concepts, applications and programming* (2nd ed.). New York: Routledge Taylor & Francis Group.
- Caizhen, L. (2010). Who is poor in China? A comparison of alternative approaches to poverty assessment in Rural Yunnan. *Journal of Peasant Studies*, 37(2), 407-428.
- Caldwell, J., & Caldwell, P. (1993). Women's position and Child Mortality and Morbidity in Less Developed Countries. In Mason K, Federici N, Sogner & Sudman S (Eds.), *Women's Position and Demographic Change* (pp. 122-139). Oxford: Clarendon Press.
- Catford, J. C. (1967). *A Linguistic Theory of Translation*. Oxford: Oxford University Press.
- CBS, World Bank, SIDA, & SID. (2005). *Geographic Dimensions of Well-being in Kenya: Who and Where are the Poor? A Constituency Level Profile*. Nairobi: Government Printer.
- CDF Board. (2010). Constituencies Development Fund Board Service Charter. In CDF Board (Ed.). Nairobi.
- Central Bureau of Statistics. (2009). *Kenya Economic Survey*. Nairobi, Kenya.
- Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], & ORC Macro. (2004). *Kenya Demographic and Health Survey 2003*.
- Chambers, R. (1981). Rural Poverty Unperceived: Problems and Remedies. *World Development*, 9, 1-19.
- Chambers, R. (1983). *Rural development: Putting the Last First*. Essex: Longman.
- Chambers, R. (2001). The World Development Report: concepts, content and a Chapter 12. *Journal of International Development*, 13(3), 299-306. doi: 10.1002/jid.784
- Chambers, R. (2005). *Ideas for Development*. London: Earthscan.
- Chang, H. (2009). *Economic History of the Developed World: Lessons for Africa*. A lecture delivered in the Eminent Speakers Program of the African Development Bank. Faculty of Economics. Faculty of Economics. University of Cambridge. Retrieved from

<http://www.afdb.org/fileadmin/uploads/afdb/News/Chang%20AfDB%20lecture%20text.pdf>

- Chepngheno-Langat, G. (2013). Perception of vulnerability to HIV infection among older people in Nairobi, Kenya: A need for intervention. *Journal of Biosocial Science*, 45(02), 249-266. doi:10.1017/S0021932012000417
- Chipimo-Mbizule, C. (1997). Lusaka Longitudinal Livelihood Cohort Study *Baseline Study in peri-urban Lusaka*. CARE Zambia.
- Chomsky, N. (1999). *Profit over People - Neoliberalism and Global Order*. New York: Seven Stories Press
- Claude Saha, J. (2008). Reducing poverty in sub-Saharan Africa: the need for participatory governance. *Development in Practice*, 18(2), 267-272. doi: 10.1080/09614520801899192
- Cochran, W. (1963). *Sampling Techniques*. New York: Wiley.
- Cochran, W. (1977). *Sampling techniques*. New York: Wiley.
- Cohen, J. N. (2007). *The impact of neoliberalism, political institutions and financial autonomy on economic development, 1980--2003*. PhD, Princeton University. Retrieved from <http://proquest.umi.com/pqdlink?Ver=1&Exp=03-31-2017&FMT=7&DID=1367852641&RQT=309&attempt=1&cfc=1>
- Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94(Supplement).
- Constituencies Development Fund. (2011). Constituencies Development Fund Retrieved July 29, 2011, from <http://www.cdf.go.ke/>
- Conway, T., de Haan, A., & Norton, A. (Eds.). (2000). *Social Protection: New Directions of Donor Agencies*. London: Department for International Development.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed-methods approaches*. Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. (2008). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. California: Sage Publications.
- Czaja, R., & Blair, J. (1996). *Designing Surveys: A Guide to Decisions and Procedures*. Thousand Oaks, California: Pine Forge Press.
- Demps, I. J., Thornton, B., & Baker, E. (2012). The role of age in employee perceptions of salary reductions *Journal of Behavioral Studies in Business*, 5, 1-8.
- Devereux, S. (2003). *Conceptualizing destitution*. IDS Working Paper 217. Institute of Development Studies. Brighton. Retrieved from <http://www.ids.ac.uk/files/Wp216.pdf>
- Dey, J. (1982). Development Planning in The Gambia: The Gap between Planners'and Farmers' Perceptions, Expectations and Objectives *World Development*, 10(5), 377-396.
- Diamond, I., & Jefferies, J. (2001). *Beginning statistics: an introduction for social scientists*. London: Sage.
- Dorn, D., Fischer, J. A., Kirchgassner, G., & Sousa-Poza, A. (2007). Is it culture of democracy? The impact of democracy, and culture on happiness. *Social Indicators Research*, 82(3), 505-526.
- Doss, C., Mcpeak, J., & Barrett, C. B. (2008). Interpersonal, Intertemporal and Spatial Variation in Risk Perceptions: Evidence from East Africa. *World Development*, 36(8), 1453-1468.
- Drennan, M. (October 1998). Reproductive health: new perspectives on men's participation *Population Reports* (Vol. Series J). Baltimore: Johns Hopkins School of Public Health, Population Information Program.
- Durkheim, E. (1893/1964). *The division of labor in society*. New York: Free Press.
- Ebdon, R. (1995). Poverty perceptions among rural herders and sum inhabitants of Chuluut sum, Arkhangai Aimag in Mongolia. Ulaanbaatar, Mongolia: Centre for Social Development and
- FAO.Essendi, H., Madise, N., & Matthews, Z. (2014). Perceptions of development by residents of a rural community in Kenya: A capability issue. *Journal of African Studies and Development*, 6(4), 67-77.
- Ewel, J. J. (1999). Natural systems as models for the design of sustainable systems of land use.

- Agroforestry Systems*, 45, 1-21. Ezeh, A. C., Mberu, B. U., & Emina, J. O. (2009). Stall in fertility decline in Eastern African countries: regional analysis of patterns, determinants and implications. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1532), 2991-3007. doi: 10.1098/rstb.2009.0166
- Ezzati, M., Lopez, A. D., Rodgers, A., Vander Hoorn, S., & Murray, C. J. L. (2002). Selected major risk factors and global and regional burden of disease. *The Lancet*, 360(9343), 1347-1360. doi: [http://dx.doi.org/10.1016/S0140-6736\(02\)11403-6](http://dx.doi.org/10.1016/S0140-6736(02)11403-6)
- Falkingham, J. (1999). *Welfare in Transition: Trends in Poverty and Well-being in Central Asia*. Case Papers, (20). London School of Economics.
- Falkingham, J. (2000). Poverty, affordability and access to health care. In McKee M, Healy J & Falkingham J (Eds.), *Health Care in Central Asia*. Open University Press.
- FAO. (2005). *The State of Food Insecurity in the World: Eradicating world hunger- key to achieving the Millennium development Goals*. Rome, Italy: FAO.
- Feachem, R. G. A. (2000). Poverty and inequity: a proper focus for the new century. *Bulletin of the World Health Organization*, 78(1), 1-2.
- Ferree, M. M. (1990). Beyond separate spheres: Feminism and family research 866-884. *Journal of Marriage and the Family*, 52.
- Field, A. (2009). *Discovering statistics using SPSS*. London: Sage.
- Filkins, R., Allen, J. C., & Cordes, S. (2000). Predicting Community Satisfaction among Rural Residents: an Integrative Model*. *Rural Sociology*, 65(1), 72-86. doi: 10.1111/j.1549-0831.2000.tb00343.x
- Filmer, D., & Pritchett, L. H. (1999). The impact of public spending on health: does money matter? *Social Science & Medicine* 49(10), 1309-1323.
- Food and Agricultural Organization. (1997). *Human Nutrition in the Developing World*. Rome: Food and Agricultural Organization of the United Nations.
- Fotso, J. C. (2006). Child Health Inequities in Developing Countries: Differences across Urban and Rural Areas. *International Journal for Equity in Health*, 5(9), 1-10.
- Fotso, J. C. (2007). Urban-rural Differentials in Child Malnutrition in Sub-Saharan Africa: Trends and Socioeconomic Correlates. *Health and Place*, 13, 205-223.
- French, D. P., & Cooke, R. (2012). Using the theory of planned behaviour to understand binge drinking: The importance of beliefs for developing interventions. *British Journal of Health Psychology*, 17(1). doi: 10.1111/j.2044-8287.2010.02010.x
- Frey, B., & Stutzer, A. (2002). *Happiness and Economics*. Princeton, NJ: Princeton University Press.
- Frieden, J. (2001). Inequality, causes and possible futures. *International Social Science Review*, 2(1), 33-40.
- Friedmann, J. (1992). *Empowerment: the politics of alternative development*. Cambridge: Blackwell.
- Frongillo, E. A. J., deOnis, M., & Hanson, K. (1997). Socioeconomic and Demographic Factors Are Associated with Worldwide Patterns of Stunting and Wasting in Children. *The Journal of Nutrition*, 2302-2309.
- Futardo, C. (1964). *Development and Underdevelopment* Berkeley, CA: University of California Press.
- Gereffi, G., & Fonda, S. (1992). Regional Paths of Development. *Annual Review of Sociology*, 18, 419-448.
- Gichuki, F., Mbohoh, S., Tiffen, M., & Mortimore, M. (2000). Makueni district profile: synthesis. *Drylands Research Working Paper 1, Working Paper 1*. Retrieved from
- Gichuki, F. N. (2000). Makueni district profile: rainfall variability, 1950-1997. *Drylands Research Working Paper 2, Working Paper 2*. Retrieved from
- Gilles, M., Perkins, D. M., Roemer, M., & Snodgrass, D. R. (1996). *Economics of Development*. New York and London: WW Norton & Company.
- Gleason, H. A., Jr. (1961). The Bantu Languages of Africa by M. A. Bryan. *Language*, 37(2), 308-311. doi: 10.2307/410866

- Global Futures Studies & Research. (2013). Global challenges facing humanity: How can population growth and resources be brought into balance? <http://www.millennium-project.org/millennium/Global_Challenges/chall-03.html>
- GOK. (2006). *Agricultural Annual Report, Makeni District-2006*. Government of Kenya. Ministry of Agriculture, Livestock and Fisheries, Makeni.
- Green, D. (2008). *From Poverty to Power: How Active Citizens and Effective States can Change the World*. Oxford: Oxfam International.
- Green, M. (2007). Representing poverty and attacking representations: Perspectives on poverty from social anthropology. *Journal of Development Studies*, 42(7), 1108-1129.
- Guijt, I., & Shah, M. K. (1998). Waking up to power, conflict and process. In Guijt I & Shah MK (Eds.), *The Myth of Community: Gender Issues in Participatory Development*. London: Intermediate Technology Publications.
- Gursoy, D., Jurovski, C., & Uysal, M. (2002). Resident Attitudes: A Structural Modelling Approach. *Annals of Tourism Research*, 29(1), 79-105.
- Haddad, L., Ruel, M. T., & Garrett, J. L. (1999). Are Urban Poverty and Undernutrition Growing? Some Newly Assembled Evidence. *World Development*, 27(11), 1891-1904.
- Harris-Lacewell, M., & Albertson, B. (2005). Good Times?: Understanding African American Misperceptions of Racial Economic Fortunes. *Journal of Black Studies*, 35(5), 650-683. doi: 10.2307/40034342
- Harrison, L. E., & Huntington, S. P. (Eds.). (2000). *Culture matters: how values shape human progress*. New York: Basic Books.
- Haub, C. (2007). World Population Data Sheet <Available at: http://www.prb.org/pdf07/07WPDS_Eng.pdf> Accessed May 07 2014. In Population Reference Bureau (Ed.).
- Haub, C. (2012). Fact Sheet: World Population Trends 2012. In Population Reference Bureau (Ed.).
- Hayhoe, C. R. (1990). *Perceived economic well-being and active participation in financial decision making*. Paper presented at the Annual conference of the association for financial counselling and planning education, Columbia, MD.
- Hayhoe, C. R., & Wilhelm, M. S. (1998). Modeling Perceived Economic Well-Being In A Family Setting: A Gender Perspective *Financial Counselling and Planning*, 9(1).
- Hennink, M., Hutter, I., & Bailey, A. (2011). *Qualitative Research Methods*. London, California, New Delhi and Singapore: Sage.
- Hinde, H. (1904). *Vocabularies of the Kamba and Kikuyu languages of East Africa*. Cambridge: Cambridge University Press.
- IFAD. (2010). Rural poverty report 2011. New realities, new challenges: new opportunities for tomorrow's generation. Rome: International Fund for Agricultural Development (IFAD).
- IMF. (2011). Poverty Reduction Strategy Papers (PRSP), from <http://www.imf.org/external/np/exr/facts/pdf/prsp.pdf>
- IMF. (World Economic Outlook 2013). World Economic and Financial Surveys: World Economic Outlook Database <<http://www.imf.org/external/pubs/ft/weo/2013/01/weodata/index.aspx>>. Accessed January 08 2014
- IUCN, UNEP, & WWF. (1980). World Conservation Strategy: Living Resource Conservation for Sustainable Development: International Union for Conservation of Nature and Natural Resources (IUCN).
- James, W. J. (1972). Longitudinal study of the morbidity of diarrheal and respiratory infections in malnourished children. *The American Journal of Child Nutrition*, 25, 690-694.
- Joreskog, K. G. (Ed.). (1993). *Testing Structural Equation Models in Testing Structural Equation Models*, KA Bollen and JS Long, eds., pp.294-316. Newbury Park CA: Sage.
- Kagia, R. (2005). *Balancing the Development Agenda: The Transformation of the World Bank Under James Wolfensohn, 1995-2005*. Washington DC: The World Bank.
- Kambhampati, U. S. (2004). *Development and the developing world*. Cambridge, Oxford and Malden: Polity Press in Association with Blackwell Publishing Ltd.

- Kanagawa, M., & Nakata, T. (2008). Assessment of access to electricity and the socio-economic impacts in rural areas of developing countries. *Energy Policy*, 36, 2016-2029.
- Kates, R. W., Parris, T. M., & Leiserowitz, A. A. (2005). What is Sustainable Development? Goals, Indicators, Values and Practice. *Environment: Science and Policy for Sustainable Development*, 47(3), 8-12.
- Kenya Ministry of Agriculture. (2010). Kenya Soil Survey <Retrieved on May 03 2014 from <http://www.infonet-biovision.org/default/ct/690/agrozones>>.
- Kenya Ministry of Local Government. (2011). Local Authorities Transfer Fund Retrieved July 29, 2011, from http://www.localgovernment.go.ke/index.php?option=com_content&view=article&id=176:local-authorities-transfer-fund&catid=89:kenya-local-government-reform-programme&Itemid=275
- Kim, Y. M., Marangwanda, C., & Kols, A. (1996). Involving Men in Family Planning: The Zimbabwe Male Motivation and Family Planning Method Expansion Project, 1993-1994 [IEC Field Report Number 3] (Vol. 34). Baltimore, MD, USA: Johns Hopkins School of Public Health, Center for Communication Programs.
- Kingsbury, D., Remenyi, J., McKay, J., & Hunt, J. (2004). *Key Issues in development*. Basingstoke: Palgrave Macmillan.
- KIPPRA. (2004). *Quantitative and qualitative methods for poverty analysis*. Paper presented at the Proceedings of the Workshop on the quantitative and qualitative methods of poverty analysis held on 11 March 2004, Nairobi.
- Kiringai, J., & Levin, J. (2008). *Achieving the MDGs in Kenya with some aid and reallocation of public expenditures*. Swedish Business School. Örebro University.
- KNBS. (2007a). Kenya Integrated Household Budget Survey-2005/06 Nairobi: Kenya National Bureau of Statistics.
- KNBS. (2007b). *Kenya National Adult Survey Report*. Nairobi: Government Printer.
- KNBS. (2010). *2009 Kenya Population and Housing Census*. Nairobi: Government Printer.
- KNBS. (2014). Revised Quarterly Gross Domestic Product. Nairobi: Kenya National Bureau of Statistics.
- KNBS, & ICF Macro. (2010). Kenya Demographic and Health Survey 2008-09. Calverton, Maryland: KNBS and ICF Macro.
- KNBS, & UNICEF. (2008). Multiple Indicator Cluster Survey; Monitoring the situation of children and women. Kenya Eastern Province, Makueni District: Kenya National Bureau of Statistics and United Nations Children's Fund.
- Kovacs. (2000). Perceptions of environmental change in a tropical coastal wetland. *Land Degradation and Development* 11, 209-220.
- Kratzer, C. Y. (1991). *Perceived economic well-being of three cohorts of rural female household financial managers*. Unpublished Doctoral Dissertation. Michigan State University.
- Kuznets, S. (1955). Economic Growth and Income Inequality. *The American Economic Review*, 45(1).
- Laderchi, C. R. (1997). Poverty and its many dimensions: The role of income as an indicator. *Oxford Agrarian Studies*, 25(3), 345-360. doi: 10.1080/13600819708424139
- Laderchi, C. R., Saith, R., & Stewart, F. (2003). Does it Matter that we do not Agree on the Definition of Poverty? A Comparison of Four Approaches. *Oxford Development Studies*, 31(3), 243-274. doi: 10.1080/1360081032000111698
- Lall, S. (1975). Is Dependence a Useful Toll in Analysing underdevelopment? *World Development*, 3(11), 799-810.
- Leach, L. J., Hayhoe, C. R., & Turner, P. R. (1999). Factors Affecting Perceived Economic Well-being Of College Students: A Gender perspective. *Financial Counselling and Planning*, 10(2).
- Ledwith, M. (1997). *Community Development: A Critical Approach*. Birmingham: Venture Press.
- Levinson, F. J., & Basset, L. (2007). Malnutrition is Still a Major Contributor to Child Deaths: But Cost-Effective Interventions Can Reduce Global Impacts. Washington DC: Population Reference Bureau.

- Liang, Z. (2006). *Financial Development, Growth, and Regional Disparity in Post-Reform China*. Research Paper World Institute for Development Economics Research. United Nations University. Retrieved from <http://www.microfinancegateway.org/gm/document-1.9.24901/43818.pdf>
- Lilja, N., & Dixon, J. (2008). Operationalising participatory research and gender analysis: new research and assessment approaches. *Development in Practice*, 18(4-5), 467-478. doi: 10.1080/09614520802181202
- Lipton, M. (1977). *Why Poor People Stay Poor: Urban Bias in World Development*. Cambridge: Harvard University Press.
- Lisek, K. (2013). General elections in Kenya. Available online at <http://www.europarl.europa.eu/intcoop/election_observation/missions/2009-2014/2013_03_04_kenya.pdf>. Accessed May 11 2014: Election Observation Delegation, 2-3 March 2013.
- Lord, F. M., & Novick, M. R. (1968). *Statistical Theories of Mental Test Scores*. Reading, MA: Addison-Wesley.
- Lumsden, J. (1976). Test theory. *Annual Review of Psychology*, 27(251-280).
- Maccoby, E. E. (2002). Gender and Group Process: A Developmental Perspective. *Current Directions in Psychological Science*, 11(2).
- MacQueen, K. M., McLellan, E., Metzger, D., Kegeles, S., Strauss, R. P., Scotti, R., . . . Trotter, R. T. (2001). What is community? An evidence-based definition for participatory public health. *American Journal of Public Health*, 91(12), 1929-1938.
- Madise, N. J., Matthews, Z., & Margetts, B. (1999). Heterogeneity of child nutritional status between households: A comparison of six sub-Saharan African countries. *Population Studies*, 53, 331-343.
- Magadi, M., Madise, N., & Diamond, I. D. (2001). Factors associated with unfavourable birth outcomes in Kenya. *Journal of Biosocial Science*, 33(2), 199-225.
- Mailu, G. M. (2013). *Kenya's MDG status report to date*. Paper presented at the Post-2015 MDGs Forum, Nairobi.
- Mariara JK, Ndege GK, & Kirii DM. (2006). *Determinants of Children's Nutritional Status in Kenya: Evidence from Demographic and Health Surveys*. Paper presented at the Centre for the study of African Economies (CSAE)
- Mason, A. D., & Rozelle, S. D. (1998). Schooling Decisions, Basic Education, and the Poor in Rural Java.
- Maxwell, S. (2001). The evolution of thinking about food security. In Devereux S & Maxwell S (Eds.), *Food Security in Sub-Saharan Africa* (pp. 13-32). London: ITDG Publishers.
- McGee, R. (2004). Constructing Poverty Trends in Uganda: A Multidisciplinary Perspective. *Development and Change*, 35(3), 499-523. doi: 10.1111/j.1467-7660.2004.00363.x
- McKinley, T. (1997). *Beyond the Line: Implementing Complementary Methods of Poverty Measurement*. UNDP Technical Support Document Number 3.
- Mohamad, F. S., Hayhoe, C. R., & Goh, L. A. (2006). Attitudes, Values and Belief Towards Money: Gender and Working Sector Comparison. *Pertanika J. Soc. Sci. & Hum.*, 14(2), 121-130.
- Moser, C. O. N. (1993). *Gender Planning and Development: Theory, Practice and Training*. London and New York: Routledge.
- Mosley, W. H., & Chen, L. C. (1984). An analytic framework for the study of child survival in developing countries. *Population and Development Review*, 10(Supplementary), 25-45.
- Moyo, D. (2009). *Dead Aid*. London: Penguin Books.
- Muhula, R. (2009). Horizontal Inequalities and Ethno-regional politics in Kenya. *Kenya Studies Review*, 1(2).
- Mukui, J. T. (2005). Poverty analysis in Kenya: ten years on: Central Bureau of Statistics (CBS), Society for International Development (SID) and Swedish International Development Agency (SIDA).
- Mwaseba, D. L., Mattee, A. Z., Kaarhus, R., Lazaro, E. A., Mvena, Z. S. K., Wambura, R. M., & Kiranga, E. D. (2009). Perceptions and practices of farmer empowerment in Tanzania. *Development in Practice*, 19(3), 403-413. doi: 10.1080/09614520902808282
- MYO. (2014). Maendeleo Ya Wanawake <<http://mywokenya.org/>> Accessed January 05 2014

- Mzalendo. (2014). Projects in Makueni. Available online at: <http://info.mzalendo.com/projects/in/makueni/> <Accessed on 06 December 2014>
- Narayan, D., Chambers, R., Shah, M. K., & Petesch, P. (2000). *Voices of the Poor: vol. 2, Crying out for Change*. New York: Oxford University Press for the World Bank.
- National AIDS and STI Control Programme, & Kenya Ministry of Health. (2008). *Kenya AIDS Indicator Survey 2007: Preliminary Report*. Nairobi.
- National Coordinating Agency for Population and Development. (2005). *Makueni District Strategic Plan 2005-2010 for Implementation of the National Population Policy for Sustainable Development: National Coordinating Agency for Population and Development*.
- National Coordinating agency for Population and Development (NCAPD), Ministry of Health (MOH) [Kenya], Central Bureau of Statistics (CBS), & ORC Macro. (2005). *Kenya Service Provision Assessment (KSPA) 2004*. Nairobi, Kenya.
- National Council for Population and Development. (2013). *Kenya Population Situation Analysis*. Nairobi: National Council for Population and Development and United Nations Population Fund Kenya Country Office.
- Neil, A., Golden, L., Millet, G., & Coogan, D. (Eds.). (1980). "Sex-typed Product Images: The Effects of Sex, Sex Role Self Concept, and Measurement Implications," In *Advances in Consumer Research* (Vol. 7): MI: Association for Consumer Research.
- Nel, P. (2003). Income Inequality, Economic Growth, and Political Instability in Sub-Saharan Africa. *The Journal of Modern African Studies*, 41(4), 611-639.
- Newby, K. V., Wallace, L. M., & French, D. P. (2012). How do young adults perceive the risk of chlamydia infection? A qualitative study. *British Journal of Health Psychology*, 17(1), 144-154. doi: 10.1111/j.2044-8287.2011.02027.x.
- Nfotabong-Atheull, A., Din, N., Koum, L. G. E., Satyanarayana, B., Koedam, N., & Dahdouh-Guebas, F. (2011). Assessing forest products usage and local residents' perception of environmental changes in peri-urban and rural mangroves of Cameroon, Central Africa. *Journal of Ethnobiology and Ethnomedicine*, 7(41). doi: 10.1186/1746-4269-7-41
- Nokelainen, P. (1999). *Introduction to Structural Equation Modeling: Research Centre for Vocational Education: University of Tampere*.
- Notestein, F. (1945). Population - the long view. In Schultz TW (Ed.), *Food for the World*. Chicago: Chicago University Press.
- Notestein, F. (1953). *Economic problems of population change*. Paper presented at the Proceedings of the Eighth International Conference of Agricultural Economists, London.
- Nurse, D. (2006). Focus in Bantu: verbal morphology and function. *ZAS Papers in Linguistics*, 43, 189-207.
- Nzioka, C. (2000). Makueni district profile: Human resource management, 1989-1998. *Drylands Research Working Paper 9*. Retrieved from
- Oakley, A. (1972). *Sex, Gender and Society*. London: Temple Smith.
- ODI. (1993). What can we do with a Rights-Based Approach to Development? *Briefing Paper* (Vol. 3): Overseas Development Institute (ODI).
- Okafor, F. C. (1982). Community Involvement in Rural Development: A Field Study in the Bendel State of Nigeria. *Community Development Journal*, 17(2).
- Okello, D. (2006). *Emerging Discourses on Inequality in Kenya and Implications on Policy and Politics*. Paper presented at the Mijadala on Social Policy, Governance and Development in Kenya. Development Policy Management Forum, Holiday Inn, Nairobi.
- Omondi-Odhiambo. (1997). Men's Participation in Family Planning Decisions in Kenya. *Population Studies*, 51, 29-40.
- Onsomu, E., Nzomo, J., & Obiero, C. (2005). The SACMEQ II Project in Kenya: A study of the conditions of schooling and the quality of education. Harare: SACMEQ.
- Otolo, R. A., & Wakhungu, J. W. (2013). Factors Influencing Livelihood Zonation in Kenya. *International Journal of Education and Research*, 1(12).
- Overholt, C., Anderson, M., Cloud, K., & Austin, J. (1984). *Gender Roles in Development*. West Hartford, Connecticut: Kumarian Press.
- Oxfam. (2006). *delivering the agenda*, Oxfam International briefing paper.

- Palloni, A. (2006). Reproducing inequalities: Luck, wallets, and the enduring effects of childhood health. *Demography*, 43(4), 587-615.
- Peel, J. D. Y. (1978). Qlaju: A Yoruba concept of development. *Journal of Development Studies*, 14(2), 139-165.
- Peet, R., & Hartwick, E. (2009). *Theories of Development: Contentions, Arguments, Alternatives*. New York: The Guilford Press.
- Pelletier, D. L., Frongillo, A. E., & Habicht, J. (1993). Epidemiologic Evidence for a Potentiating Effect of Malnutrition on Child Mortality. *American Journal of Public Health*, 83(8), 1130-1133.
- Pelletier, D. L., Frongillo Jr, E. A., Schroeder, D. G., & Habicht, J.-P. (1995). The effects of malnutrition on child mortality in developing countries. *Bulletin of the World Health Organization*, 73(4), 443-448.
- Pigg, S. L. (1992). Inventing Social Categories through Place: Social Representations and Development in Nepal *Comparative Studies in Society and History*, 34(3), 491-513.
- Plehwe, D., Bernard, W., & Gisela, N. (Eds.). (2006). *Neoliberal Hegemony - A Global Critique*. London: Routledge.
- Population Reference Bureau. (2012). 2012 World Population Data Sheet <http://www.prb.org/pdf12/2012-population-data-sheet_eng.pdf> Accessed December 21 2013: Population Reference Bureau.
- Porter, N. M. (1990). *Testing a model of financial well-being*. Blacksburg: Virginia Polytechnic Institute and State University.
- Porter, N. M., & Garman, E. T. (1990). *A conceptual framework for measuring financial well-being*. Paper presented at the 1990 Annual Proceedings of the Association for Financial Counselling and Planning Education: Many Perspectives Coming Together, University of Missouri.
- Porter, N. M., & Garman, E. T. (1993). Testing a Conceptual Model of Financial Well-Being. *Financial Counseling and Planning*, 4.
- Potter, J. E., Schmertmann, C. P., & Cavenaghi, S. M. (2002). Fertility and Development: Evidence from Brazil. *Demography*, 39(4), 739-761. doi: 10.2307/3180829
- Pritchett, L., & Woolcock, M. (2004). Solutions When the Solution is the Problem: Arraying the Disarray in Development. *World Development*, 32(2), 191-212.
- Putnam, R. (1995). *Making democracy work: Civic traditions in modern Italy*. Princeton, New Jersey: University Press.
- Ray, D. (1998). *Development Economics*. Princeton, New Jersey: Princeton University Press.
- Republic of Kenya. (1965). *African Socialism and its Application to Planning in Kenya*. Nairobi: Government Printer.
- Republic of Kenya. (1979). *National Development Plan 1979-1983*. Nairobi: Government Printer.
- Republic of Kenya. (1999). *Medium Term Expenditure Framework (MTEF) 2000/2001 to 2002/2003: MTEF objectives, components and institutional arrangements*. Paper presented at the MTEF Workshop, Nairobi.
- Republic of Kenya. (2002). *Kenya Rural Development Strategy, 2001-2016*. Nairobi: Government Printer.
- Republic of Kenya. (2007a). *Kenya Vision 2030: A Globally Competitive and Prosperous Kenya*. Nairobi.
- Republic of Kenya. (2007b). *Kenya Vision 2030: Kenya's long-term national planning strategy*. Nairobi: Government Press.
- Republic of Kenya. (2008a). *First Medium Term Plan, 2008-2012*. Nairobi: Government Press Retrieved from <http://www.imf.org/external/pubs/ft/scr/2010/cr10224.pdf>.
- Republic of Kenya. (2008b). *First Medium Term Plan, 2008-2012: Kenya Vision 2030: a Globally Competitive and Prosperous Kenya*. Nairobi: Government Printer.
- Republic of Kenya. (2009). *Makueni District Development Plan 2008-2012*. Nairobi: Government Printer.
- Republic of Kenya. (2010). *Public Expenditure Review 2009: Setting the Foundation for Efficient Public Spending Towards Implementation of Vision 2030*.

- Republic of Kenya. (2011a). Availability of Energy Sources, by County Retrieved August 3, 2011, from <http://www.opendata.go.ke/Energy/Availability-of-Energy-Sources-by-County/g9hi-bs9n>
- Republic of Kenya. (2011b). County Data Sheet: Makeni Retrieved August 5, 2011, from <http://opendata.go.ke/facet/counties/Makeni?&page=4>
- Republic of Kenya. (2011c). District Poverty Data Kenya Integrated Household Budget Survey (KIHBS) Retrieved August 5, 2011, from <http://opendata.go.ke/dataset/District-Poverty-Data-KIHBS/pnvr-waq2>
- Republic of Kenya. (2011d). Gross Attendance Ratio by Sex and Region Retrieved August 3, 2011, from <http://www.opendata.go.ke/Education/Gross-Attendance-Ratio-by-Sex-and-Region/7er3-nzh7>
- Republic of Kenya. (2011e). National Food and Nutrition Security Policy. Available online at: <https://extranet.who.int/nutrition/gina/sites/default/files/KEN%202011%20National%20Food%20and%20Nutrition%20Security%20Policy%5B1%5D.pdf> <Accessed 09 January 2015>. Nairobi: Agricultural Sector Coordination Unit.
- Republic of Kenya. (2012). National Nutrition Action Plan 2012-2017. Nairobi: Ministry of Public Health and Sanitation.
- Republic of Kenya. (2013). *Second Medium Term Plan (2013-2017): Transforming Kenya: Pathway to devolution, socio-economic development, equity and national unity*. Nairobi: Government Printer.
- Rostow, W. W. (1960). *The Stages of Economic Growth: A Non-Communist Manifesto*. Cambridge: Cambridge University Press.
- Rusatira, J. C., & Kyamanywa, P. (2013). Men and Family Planning in Rwanda: What Affects the Integration of Men in Family Planning? *Measure Evaluation, WP-12-132*.
- Sacks, D. W., Stevenson, B., & Wolfers, J. (2010). *Subjective Well-Being, Income, Economic Development and Growth*. National Bureau of Economic Research. Cambridge, MA.
- Sahn, D. E., & Sahn, D. E. (2004). *Urban-Rural Inequality in Living Standards in Africa. Working Papers UNU-WIDER Research Paper* World Institute for Development Economic Research (UNU-WIDER). Retrieved from <http://ideas.repec.org/p/unu/wpaper/rp2004-04.html>
- Sahn, D. E., & Stifel, D. C. (2002). Urban-Rural Inequality in Africa: Cornell University.
- Sahn, D. E., & Stifel, D. C. (2003). Progress Toward the Millennium Development Goals in Africa. *World Development, 31*(1), 23-52. doi: [http://dx.doi.org/10.1016/S0305-750X\(02\)00121-3](http://dx.doi.org/10.1016/S0305-750X(02)00121-3)
- Sahn, D. E., & Stifel, D. C. (2003). Urban-Rural Inequality in Living Standards in Africa. *Journal of African Economies, 12*(4), 564-597.
- Sakisaka, K., Wakai, S., Kuroiwa, C., Flores, L. C., Kai, I., Mercedes Arago'n, M., & Hanada, K. (2006). Nutritional status and associated factors in children aged 0–23 months in Granada, Nicaragua. *Public Health, 120*(5), 400-411. doi: <http://dx.doi.org/10.1016/j.puhe.2005.10.018>
- Sastry, N. (1997). What explains rural–urban differentials in child mortality in Brazil? *Social Science & Medicine, 44*(7), 989-1002.
- Sastry, S. (2004). Trends in socioeconomic inequalities in mortality in developing countries. . 2004;41:443–464. doi: 10.1353/dem.2004.0027. [PubMed] [Cross Ref]. *Demography, 41*(3), 443-464.
- Saunders, P. (2003). Stability and Change in Community Perceptions of Poverty: Evidence from Australia. *Journal of Poverty, 7*(4), 1-20.
- Scrimshaw, S., & SanGiovanni, J. P. (1997). Synergism of nutrition, infection, and immunity: an overview. *American Journal of Clinical Nutrition, 66*, 464S-477S.
- Sen, A. (1985). *Commodities and Capabilities* Amsterdam: North-Holland.
- Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Sen, A. (2010). *Development as Freedom*. Oxford: Oxford University Press.
- Sen, G. (2008). Poverty as a Gendered Experience: The Policy Implications. In EHRENPREIS D (Ed.), *Poverty in Focus: Gender Equality* (pp. 6-7). Brasilia: International Poverty Centre (IPC).
- Shah, A. (2010). Today, over 22,000 children died around the world. *Social, Political, Economic and Environmental Issues That Affect Us All*

- from <http://www.globalissues.org/article/715/today-over-22000-children-died-around-the-world>
- SHDRP, & UNDP. (1998). Participatory Poverty Assessment, Shinyanga Region, Tanzania
Shinyanga Human Development Report Project.
- Shen, C., & Williamson, J. (2001). Accounting for cross-national differences in infant mortality decline (1965-1991) among less developed countries: effects of women's status, economic dependency and state strength. *Social Indicators Research*, 53(3), 257-288.
- Smith, C., & Rees, G. (1998). *Economic Development* (2nd edition ed.). Basingstoke; England: Macmillan.
- Smith, L. C., Ruel, M. T., & Ndiaye, A. (2004). *Why is Child Malnutrition Lower in Urban than Rural Areas? Evidence from 36 Developing Countries*. Discussion Paper BRIEFS: Discussion Paper 176. IFPRI.
- So, A. Y. (1990). *Social Change and Development*. California: Sage Publications.
- Soubbotina, T. P., & Sheram, K. A. (2000). Beyond economic growth: meeting the challenges of global development. Washington DC: The World Bank.
- Stewart, F. (2010). Horizontal inequalities in Kenya and the political disturbances of 2008: some implications for aid policy. *Conflict, Security & Development*, 10(1), 133-159.
- Stiglitz, J. E. (1996). Some lessons from the East Asian Miracle. *The World Bank Research Observer*, 11, 151-177.
- Suhr, D. (2009). *Exploratory or confirmatory factor analysis? Working paper, University of Northern Colorado*. <<http://www2.sas.com/proceedings/sugi31/200-31.pdf>> Accessed on January 03 2014
- Swallow, B. (2005). Potential for Poverty Reduction Strategies to Address Community Priorities: Case Study of Kenya. *World Development*, 33(2), 301-321. doi: <http://dx.doi.org/10.1016/j.worlddev.2004.07.015>
- Szirmai, A. (2005). *The Dynamics of Socio-Economic Development: An Introduction*. Cambridge: Cambridge University Press.
- The Republic of Kenya. (2010). The Constitution of Kenya Article 43, Paragraphs (c) and (d). Available online at: <https://kenyaembassy.com/pdfs/the%20constitution%20of%20kenya.pdf>. <Accessed 09 January 2015>. Nairobi: National Council for Law Reporting with the Authority of the Attorney General.
- The World Bank. (2008). Kenya Poverty and Inequality Assessment. Report No. 44190-KE (P. R. a. E. M. U. A. Region, Trans.) (Vol. 1: Synthesis Report): The World Bank.
- The World Bank. (2014a). Kenya's Devolution. Available online at <<http://www.worldbank.org/en/country/kenya/publication/kenyas-devolution>>. Accessed on May 10 2014.
- The World Bank. (2014b). Population growth (annual %). Available online at:<<http://data.worldbank.org/indicator/SP.POP.GROW>> Accessed on May 10 2014.
- Thuku, G., Gachanja, P., & Obere, A. (2013). The impact of population change on economic growth in Kenya. *International Journal of Economics and Management Sciences*, 2(6), 43-60.
- Tierney, A. M. (1997). *Local concepts of development: women food sellers and fishermen in an Oxfam programme, Tabora Region, western Tanzania*. PhD in Social Anthropology, University of London, London.
- Tiffen, M., Mortimore, M., & Gichuki, F. (1994). *More people, less erosion: environmental recovery in Kenya*. Chichester, United Kingdom: John Wiley and Sons.
- Tilak, J. B. G. (2002). Education and Poverty. *Journal of Human Development*, 3(2), 191-207.
- Tinker, I. (1990). *Persistent Inequalities: Women and World Development*. New York: Oxford University Press.
- Todaro, M. P., & Smith, S. C. (2006). *Economic Development* (9 ed.).
- Trani, J.-F., Bakhshi, P., & Rolland, C. (2011). Capabilities, Perception of Well-being and Development Effort: Some Evidence from Afghanistan. *Oxford Development Studies*, 39(4), 403-426. doi: 10.1080/13600818.2011.620089
- Traub, R. E. (1997). Classical Test Theory in Historical Perspective. *Educational Measurement: Issues and Practice*, 16(4), 8-14. doi: 10.1111/j.1745-3992.1997.tb00603.x

- UN Population Division. (2010). *World Urbanization Prospects: The 2009 Revision*. New York: United Nations.
- UNDP. (2011). *Human Development Report 2011: United Nations Development Programme*.
- UNDP. (2013). *Human Development Report 2013. The Rise of the South: Human Progress in a Diverse World*. New York: United Nations Development Fund.
- UNDP. (2014). *Human Development Index (HDI)* Retrieved February 10, 2014
- UNFPA. (2013a). *Contraception: Reducing Risks by Offering Contraceptive Service* <<http://www.unfpa.org/public/home/mothers/pid/4382>> Accessed december 21 2013
- UNFPA. (2013b). *Human Development Reports* <<http://hdr.undp.org/en/data/trends/hybrid>> Accessed January 08 2014: United Nations Development Programme.
- UNICEF. (2009). *The State of the World's Children*. New York: United Nations Children's Fund (UNICEF).
- United Nations. (1987). *Report of the World Commission on Environment and Development. General Assembly Resolution No. 42/187, 11 December 1987*. Accessed April 3 2012. New York: United Nations.
- United Nations. (2011a). *The Millennium Development Goals Report 2011*. Geneva: United Nations.
- United Nations. (2011b). *We Can End Poverty 2015: Millennium Development Goals* Retrieved July 18, 2011, from <http://www.un.org/millenniumgoals/bkgd.shtml>
- United Nations. (2011c). *World Population Prospects: The 2010 Revision*. New York: Department of Social Affairs, Population Division, United Nations.
- United Nations. (2012). *The Millennium Development Goals Report 2012*. New York: United Nations.
- United Nations. (2013a). *A new global partnership: eradicate poverty and transform economies through sustainable development. The Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda*. New York: United Nations.
- United Nations. (2013b). *Population, Development and the Environment 2013*. Accessed on March 06 2014 at <<http://www.un.org/en/development/desa/population/publications/development/pde-wallchart-2013.shtml>>. New York: Population Division, Department of Economic and Social Affairs, United Nations.
- United Nations. (2014). *Accelerating Action: Global Leaders on Challenges & Opportunities for MDG Achievement*. Available online at: <http://www.endpoverty2015.org/en/2014/09/25/mdg-advocates-outline-challenges-opportunities-for-achieving-mdgs/>. <Accessed 21 October 2014>. New York: United Nations.
- United Nations Development Program. (2003). *Third Kenya Human Development Report: Participatory Governance for Human Development*. Nairobi: United Nations Development Programme.
- United Nations Development Program. (2005a). *Population, Reproductive Health and the Millennium Development Goals*. Washington DC: United Nations Development Programme (UNDP).
- United Nations Development Program. (2005b). *Population, Reproductive Health and the Millennium Development Goals: Messages from the UN Millennium Project Reports 2005*. Washington DC: United Nations Development Programme.
- United Nations Development Program. (2009). *Human Development Report 2009: United Nations Development Programme*.
- United Nations Development Program. (2010a). *Human Development Report 2010 The Real Wealth of Nations: Pathways to Human Development*. New York: United Nations Development Programme.
- United Nations Development Program. (2010b). *Human Development Report 2010. 20th Anniversary Edition, The Real Wealth of Nations: Pathways to Human Development*. New York: Palgrave Macmillan.

- United Nations Development Program. (2010c). Human Development Reports <Accessed December 1 2010>
- United Nations Population Fund. (2013). Linking population, poverty and development <<http://www.unfpa.org/pds/poverty.html>> Accessed December 21 2013
- University of Dar-Es-Salaam. (1981). *Kamusi ya Kiswabili Sanifu*. Nairobi: Oxford University Press.
- USAID. (2011). HIV/AIDS Health Profile: sub-Saharan Africa: United States Agency for International Development (USAID) and President's Emergency Plan for AIDS Relief (PEPFAR).
- Victora, C. G., Adair, L., Fall, C., Hallal, P. C., Martorell, R., Richter, L., & Sachdev, H. S. (2008). Maternal and child undernutrition: consequences for adult health and human capital. *The Lancet*, 371(9609), 340-357. doi: 10.1016/s0140-6736(07)61692-4
- Waite, M. (1979). *Oxford English Dictionary*. Oxford: Oxford University Press.
- Wang, L. (2003). Determinants of child mortality in LDCs Empirical findings from demographic and health surveys. *Health Policy*, 65(3), 277-299.
- Wilkinson, R., & Pickett, K. (2009). *The Spirit Level: Why More Equal Societies Almost Always Do Better*. London: Allen Lane
- World Bank. (1995). *Development in Practice: Priorities and Strategies for Education*. Washington D.C.: The World Bank.
- World Bank. (2000). *World Development Report 2000/2001: Attacking Poverty Opportunity, Empowerment, and Security*. Washington, DC: The World Bank.
- World Bank. (2001). *World Development Report 2000/2001*. Washington DC: The World Bank.
- World Bank. (2009). *Kenya Poverty and Inequality Assessment Poverty Reduction and Economic Management Unit Africa Region* (Vol. Report No. 44190-KE): The World Bank.
- World Bank. (2010a). *Lessons from a Review of Interventions to Reduce Child Malnutrition in Developing Countries: What Can We Learn from Nutrition Impact Evaluations?* Washington, DC: The World Bank.
- World Bank. (2010b). *World Development Report 2010*. New York: The World Bank.
- World Bank. (2014). GNI per capita (current US\$). <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD> Retrieved December 19, 2014
- World Bank. (2015). Population growth (annual %). Available online at: <http://data.worldbank.org/indicator/SP.POP.GROW/countries?page=1> <Accessed on January 23 2015>
- World Development Indicators: Online Edition. (2010).
- World Health Organization. (1995). *Physical status: the use and interpretation of anthropometry*. Geneva: World Health Organization.
- World Health Organization. (2006). *Working together for health: The World Health Report 2006*: World Health Organization.
- World Health Organization. (2008). *The state of the world's children 2008: Child survival*. Geneva: WHO.
- World Health Organization. (2011). *Child Growth Standards: WHO Anthro (version 3.2.2, January 2011) and Macros*. Available online at: <http://www.who.int/childgrowth/software/en/> <Accessed 24 October 2014>.
- World Health Organization. (2013a). Family planning <<http://www.who.int/mediacentre/factsheets/fs351/en/>> Accessed December 21 2013.
- World Health Organization. (2013b). *Global Database on Child Growth and Malnutrition* <<http://www.who.int/nutgrowthdb/about/introduction/en/index2.html>> Accessed on December 21 2013
- World Health Organization. (2013c). *The WHO Child Growth Standards* <<http://www.who.int/childgrowth/standards/en/>> Accessed December 21, 2013.
- Wright, S. (1921). Correlation and causation. *Journal of Agricultural Research*, 20(7), 557-285.
- Yeniurt, S., & Townsend, J. D. (2003). Does culture explain acceptance of new products in a country? An empirical investigation. *International Marketing Review*, 20(4), 377 - 396.

- Yin, S., & Kent, M. (2008). Kenya: The Demographics of a Country in Turmoil <Available at: <http://www.prb.org/Publications/Articles/2008/kenya.aspx>> Accessed May 07 2014: Population Reference Bureau.
- Yuan, K. H. (2005). Fit Indices Versus Test Statistics. *Multivariate Behavioural Research*, 40(1), 115-148.
- Zulu, E., & Chepngeno, G. (2003). Spousal communication about the risk of contracting HIV/AIDS in rural Malawi. *Demographic Research*, Vol. 1, Article XI: www.demographicresearch.org.