

**VALUE CHAIN DEVELOPMENT AND WOMEN EMPOWERMENT IN
TANZANIA: A CASE OF ONION VALUE CHAIN IN NORTHERN TANZANIA**

JOHN NSHIMBA JECKONIAH

**A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY OF SOKOINE UNIVERSITY OF
AGRICULTURE. MOROGORO, TANZANIA.**

EXTENDED ABSTRACT

Women play critical roles in agricultural value chains in developing countries. However, their participation in value chain development activities does not always result into their empowerment. The main objective of this study was to examine the impacts of women participation in onion value chain development activities on their empowerment. The study was conducted in Simanjiro District and adopted a cross-sectional research design. Qualitative and quantitative data were collected using focus group discussions, key informant interviews and household surveys whereby 402 women of whom 207 (51.2%) were participants in the onion value chain development activities and 195 (48.5%) were non-participants. Moreover, eight focus group discussions were conducted. Qualitative data were analyzed using ethnographic content analysis technique with constant comparison; quantitative data were analyzed using the Statistical Package for Social Sciences. Descriptive statistics were computed to establish the profiles of research participants; gross margin were calculated to establish profit margins of different chain actors; Cumulative Empowerment Index was constructed to gauge the overall women empowerment. Principle Component Analysis was used to compute wealth quintiles as proxy for household socio-economic status. F-test was used to compare the levels of empowerment by socio-economic status. Ordinal logistic regression model was used to establish the determinants of women empowerment in onion value chain. Changes in gender roles, especially in production, were found. Women's perception on their empowerment was linked to different achievements in their lives in their social and economic contexts and was categorized into medium level of empowerment (CEI = 0.6033). Women participation in decision making was higher and farmer groups were an important source of knowledge for change. The relationship between socio-economic status and women empowerment was statistically significant ($P < 0.05$).

Ordinal logistic regression analysis revealed the predictors of women empowerment in the chain to be: marital status, education level, age at first marriage, land ownership, access to credit and participation in onion value chain ($P < 0.05$). It is recommended to the government and non-governmental organisations to promote men's involvement in women empowerment efforts, to improve women access to resources and strengthen farmer's organisations to competitively participate and get benefits from onion value chain.

DECLARATION

I, **JOHN NSHIMBA JECKONIAH**, do hereby declare to the Senate of Sokoine University of Agriculture that this dissertation is my own original work done within the period of registration and that it has neither been submitted nor being concurrently submitted in any other institution.

John Nshimba Jeckoniah

(PhD Candidate)

Date

The above declaration is confirmed

Dr. C. I. Nombo

(Supervisor)

Date

Prof. N.S.Y. Mdoe

(Supervisor)

Date

COPYRIGHT

No part of this thesis may be produced, stored in any retrieval system, or transmitted in any form or by any means without prior permission of the author or Sokoine University of Agriculture in that behalf.

ACKNOWLEDGEMENTS

I thank the Government of Tanzania through its Commission for Science and Technology (COSTECH) for sponsoring my study without which it would have been impossible to accomplish it. I am also grateful to my employer, Sokoine University of Agriculture (SUA), for granting me a study leave which enabled me to have enough time to concentrate on my PhD programme. I thank HEI-ICI Programme on developing development studies for sponsoring additional training on research methodology for PhD students and additional research grant.

I thank smallholder onion farmers, traders, small and medium enterprise (SME), transporters and retail traders of onions in Simanjiro District and other markets visited during this study who unreservedly provided important information for this study. Without their honest cooperation during the whole process of data collection it would have been very difficult to understand the impacts of their involvement in onion value chain on empowerment.

I thank my supervisors Dr. C.I. Nombo and Prof. N.S.Y. Mdoe who guided me with pure hearted wisdom and encouragement in my journey to become a researcher. I am forever grateful for their professional guidance through different stages of my study. Their constructive criticisms and enthusiastic support significantly contributed to making this study a success.

I am also gratefully indebted to the following staff in the Development Studies Institute: Dr. K. A. Kayunze, Dr. J. S. Mbwambo, Dr. A. B.S. Mwakalobo, Dr. E. E. Chingonikaya, Dr. A.N. Sikira, Dr. J. K. Urassa, Dr. K. M. B. Kitundu, Ms. F.A. Massawe, Mr. M. I.

Muhanga, Mr. G. Massawe, Mr. J.J Ringo, Mr. R.J. Salanga, Mr. J. Msinde and Mr. A.O. Malinza for their constructive comments at different stages of development of this work, which helped me to improve it. I thank Dr. E. A. Lazaro, Dr. E.E. Msuya, Dr. F. T.M. Kilima, Dr. K.S.D. Mutabazi and Dr. A.S. Sife who commented on the early drafts of this work and gave me constructive comments which helped me to improve it.

Special thanks go to my beloved wife Danty Malamia Urio, my sons Amos, Nathan, James and my daughter Moureen. Their love, moral support and prayers created a conducive psychological atmosphere for me to concentrate on my research. Their love and prayers have always been a source of my strength and encouragement. To you all I say thank you.

I thank VECO programme staff Herman Hishamu, Flora Remoy and Mr Sakaya for arrangement and support during field work for data collection. Also Simanjiro District Council is acknowledged for facilitating arrangement for data collection in the District. I thank ward extension officers: Mr. Lukumay, Paapalay Loondane, Mgeta, Mrs F. Tarimo, Mshana, and Charles who were very helpful in organizing data collection at ward and village levels. I thank my research assistants: Mumina, Kibona, Mandia, Kibiki and Janeth who enabled the data collection exercise to be successful. However, I am responsible for any errors and shortfalls which may be found in this thesis.

DEDICATION

This work is dedicated to my parents, my late father Mr. Jeckoniah K. Mvurungu, my mother Janeth Gwalema and my beloved wife Danty Malamia Urio, my sons Amos, Nathan, James and my daughter Moureen.

TABLE OF CONTENTS

EXTENDED ABSTRACT	ii
DECLARATION	iv
COPYRIGHT	v
ACKNOWLEDGEMENTS	vi
DEDICATION	viii
TABLE OF CONTENTS	ix
LIST OF PAPERS	xii
DECLARATION	xiii
LIST OF APPENDICES	xiv
LIST OF ABBREVIATIONS AND ACRONYMS	xv
CHAPTER ONE	1
1.0 INTRODUCTION	1
1.1 Background Information	1
1.2 Problem Statement	8
1.3 Justification of the Study	9
1.4 Objectives	11
1.4.1 General objective	11
1.4.2 Specific objectives	11
1.5 Research Questions and Hypotheses	11
1.5.1 Hypotheses	11
1.6 Conceptual Framework for the Study	12
1.7 Theoretical Framework for the Study	13
1.8 Organization of the Thesis	14

REFERENCES	15
CHAPTER TWO	21
PAPER ONE.....	21
Mapping Gender Roles and Relations along Onion Value Chain in Tanzania.....	21
PAPER TWO	41
Women empowerment in agricultural value chains: voices from onion growers in northern Tanzania	41
PAPER THREE	48
Socio-economic Status and Women Empowerment in Rural Tanzania: A Case of Onion Value Chain in Simanjiro District.....	48
PAPER FOUR	70
Determinants of Women Empowerment in the Onion Value Chain: A Case of Simanjiro District in Tanzania	70
CHAPTER THREE	82
3.0 CONCLUSIONS AND RECOMENDATIONS.....	82
3.1 Conclusions of Major Findings.....	82
3.1.1 Onion Value Chain and Gender Roles and Relations in the Chain	82
3.1.2 The extent of Women’s Empowerment in the Onion Value Chain.....	83
3.1.3 Gender Differences in Control of Income, Assets and Women Empowerment.....	84
3.1.4 Determinants of Women Empowerment in the Onion Value Chain	85
3.2 Theoretical Implication of the Findings.....	86
3.3 Recommendations.....	86
3.3.1 Promoting men’s involvement in women empowerment activities	87

3.3.2	Strengthening farmers organisations	87
3.3.3	Improving Women access to Land and other Resources.....	88
3.4	Areas for Future Research	88
	APPENDICES	89

LIST OF PAPERS

Paper One: Mapping Gender Roles and Relations along Onion Value Chain in Tanzania: John Jeckoniah¹, Ntengua Mdoe² Carolyne Nombo¹ Published in the *International Journal of Asian Social Science* 3(2), 2012: 523-541

Paper Two: Women empowerment in agricultural value chains: voices from onion growers in northern Tanzania: John Jeckoniah¹, Carolyne Nombo¹ Ntengua Mdoe² Published in the *Journal of Research on Humanities and Social Sciences* 2 (8), 2012: 54-59

Paper Three: Socio-economic Status and Women Empowerment in Rural Tanzania: A Case of Onion Value Chain in Simanjiro District. John Jeckoniah¹, Carolyne Nombo¹, Ntengua Mdoe². Accepted for Publication in the *Tanzania Journal of Development Studies* 12 (2), 2012

Paper four: Determinants of Women Empowerment in the Onion Value Chain: A Case of Simanjiro District in Tanzania: John Jeckoniah¹, Carolyne Nombo¹ Ntengua Mdoe². Published in the *Journal of Economics and Sustainable Development* 3 (10) 2012: 89-99

¹ Development Studies Institute, Sokoine University of Agriculture, P.O. Box 3024, Morogoro, Tanzania

² Department of Agricultural Economics and Agribusiness, Sokoine University of Agriculture, P.O. Box 3007, Morogoro, Tanzania

DECLARATION

I, **John Nshimba Jeckoniah**, do hereby declare to the Senate of Sokoine University of Agriculture that the listed papers above that make this thesis summarize my independent efforts, it is my original work and will not be part of another thesis in the “published Papers” format in any other University.

LIST OF APPENDICES

Appendix 1:	Questionnaire	89
Appendix 2:	Focus Group Discussion Guide	119
Appendix 3:	Key informants Interview Guide	120
Appendix 4:	Checklist for value chain analysis (profitability analysis)	121

LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
ASDP	Agricultural Sector Development Programme
CBO	Community Based Organisation
CEI	Cumulative/Composite Empowerment Index
CFOs	Commercial Farmers Organisations
COSTEC	Commission for Science and Technology
DALDO	District Agricultural and Livestock Development Officer
DCDO	District Community Development Officer
ECHI	Economic Contribution to Household Index
EDCI	Economic Domestic Consultation Index
FAO	Food and Agriculture Organisation
FFS	Farmers Field Schools
FGDs	Focus Group Discussions
FMI	Freedom of Movement Index
HDI	Human Development Index
HDMI	Household Decision-Making Index
IFAD	International Fund for Agricultural Development
IGAs	Income Generating Activities
IIRR	International Institute of Rural Reconstruction
ILO	International Labour Organisation
KIT	<i>Koninklijk Instituut voor de Tropen</i> (Royal Tropical Institute)
LGA	Local Government Authority
MDGs	Millennium Development Goals
MMA	Match Maker Associates

MVIWATA	<i>“Mtandao wa Vikundi vya Wakulima Tanzania”</i> , Network of Farmer Groups in Tanzania
NBS	National Bureau of Statistics
NGOs	Non-Governmental Organisations
NSGD	National Strategy for Gender Development
NSGRP	National Strategy for Growth and Reduction of Poverty
NTFPs	Non-Timber Forest Products
OFFs	Organized Family Farmers
OVC	Onion Value Chain
PADEP	Participatory Agricultural Development and Empowerment Project
PAI	Person Autonomy Index
PCA	Principal Component Analysis
PoAI	Political Autonomy Index
REPOA	Research on Poverty Alleviation
RRB	Ruvu River Basin
RWECF	Rural Women Employment Creation Project
SIDA	Swedish International Development Cooperation Agency
SIDO	Small Industries Development Organisation
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
SUA	Sokoine University of Agriculture
TASU	Tanzania Agricultural Scale Up
TDV	Tanzania Development Vision
UN	United Nations
UNDP	United Nations Development Programme

UNIDO	United Nations Industrial Development Organisation
URT	United Republic of Tanzania
USAID	United States Agency for International Development
VECO	<i>Vredeseilanden</i> (A Belgian based NGO)
VICOBA	Village Community Bank
VIP	Ventilated Improved Pit
WB	World Bank
WEAI	Women Empowerment in Agriculture Index
WEI	Women Empowerment Index

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

Gender inequality exists almost everywhere in the world. The existing gender inequality in society is recognized as one of the critical challenges impacting on the attainment of sustainable development in the world. In Tanzania, as it is in other developing countries, several efforts including gender mainstreaming in development policies, projects and programmes have been undertaken (URT, 2000; URT, 2005; URT, 2010b). Despite several efforts made by the Governments and Non-Governmental Organisations (NGOs) to mainstream gender, gender disparities still exist in almost all the countries in the world (World Bank, 2003). Gender equality is identified as a development objective in itself; as a means to promote growth, it reduces poverty and promotes better governance (World Bank, 2003). Power imbalance between men and women is said to be the origin of gender inequalities in many countries (Sevefjord and Olsson, 2004 cited in KIT *et al.*, 2012); hence many efforts to reduce inequalities focus on empowerment of men, women and other marginalized groups in the society (KIT *et al.*, 2012).

Empowerment, and women empowerment in particular, is one of the momentous issues of contemporary development policies in developing countries (Chaudhry and Nosheen, 2009). Empowerment is a complex concept, which may vary between cultures, persons, sexes, occupations and positions in life. Furthermore, men and women may have different views on empowerment in general and women's empowerment in particular (World Bank, 2002). Empowerment is defined as "a process by which those who have been denied the ability to make strategic life choices acquire the ability to do so" (Kabeer, 1999). While choices entail the possibility of having alternatives, different choices have diverse impacts

on the people's life. Strategic life choices are those that are necessary for one to live the way one wants, such as: choice of livelihood, use of contraceptives, whether and who to marry and whether to have children. Efforts to empower women, especially those involved in agricultural based livelihoods, focus on improving production and productivity as well as linking smallholder farmers to agricultural markets. Such efforts in Tanzania are being implemented through farmers field school approaches, collective action approaches and value chain approaches (URT, 2006; URT, 2010b; Barham and Chitemi, 2009; Mnenwa and Maliti, 2010). Women empowerment in the context of value chains entails change in gender roles and relations in order to enhance women's ability to shape their lives (Laven *et al.*, 2009). Development interventions such as value chain development and changes in economic structures may result into changes in gender roles, relations and empowerment.

The importance of women empowerment in development can not be overemphasized. For example, it is argued that women's empowerment is important for reasons of both principle and pragmatism (Oxfam GB, 2005; Oxfam, 2011; KIT *et al.*, 2012); it's the right thing to do because women have the same rights as men, but it's also a necessary thing because it will make the world a better place where to live and help many countries to attain human development. Empowering and investing in rural women has been shown to significantly increase productivity, reduce hunger and malnutrition as well as improve rural livelihoods, not only for women, but also for everyone (Wallerstein, 2006; KIT *et al.*, 2012). Furthermore, women's empowerment is ranked third in the Millennium Development Goals (MDGs), and it endeavours to promote gender equality and empower women. Nonetheless, many developing countries in the world are yet to achieve this important goal (URT, 2010a).

According to Basu and Basu (2001), women are less empowered compared to men in many aspects such as: education attainment, income, control over own income, bargaining power in selling their own produce and labour, participation in decision making bodies, and access to production inputs and employment opportunities. Throughout the world, Governments, NGOs and development organisations are concerned with women empowerment, and different strategies such as gender mainstreaming in development projects have been tried to enable women to challenge their subordinate position and oppressive situation in their families and societies. Tanzanian women, especially those from rural farming communities' households, have less access to and control over assets and resources, information and decision making than men (URT, 2010b). Therefore, to empower them, various measures should be taken to address gender inequalities, especially in areas where most of them derive their livelihoods.

In Tanzania women are deprived socially and economically compared to men. Disparities in men and women prevail in education, health, employment opportunities, control over assets and income, and participation in political process that make women disadvantaged and less empowered; this limits the country's ability to achieve its full potential (URT, 2010b). To improve the status of women, the Government has taken various measures to address gender inequalities by incorporating gender perspectives in policies, strategies and programmes as reflected in national policies and institutional frameworks like Tanzania Development Vision (TDV) 2025, National Strategy for Growth and Reduction of Poverty (NSGRP I and II); National Women and Gender Development Policy (2000), and National Strategy for Gender Development (NSGD) (2005). Generally, women empowerment in Tanzania has improved in terms of parity and access to education whereby (the net enrolment at primary school is 95.9%) and in political participation. The proportion of women representatives in the parliament has reached the NSGRP target

of 30% (URT, 2010a). Women empowerment has also been found to improve through participation in micro-credit schemes and small and medium enterprises (SMEs), for example in the food processing sectors (Makombe, 2006) and in small agricultural projects under the Participatory Agricultural Development and Empowerment Projects (PADEP) (URT, 2010c).

Many efforts to empower women at household and community levels have focused on raising women status through education, training, access to health, and family planning services as well as legal counseling. Politically, efforts have been made to increase women's representation in decision making organs such as setting quota for women political posts (URT, 2010a). Economically, the most popular strategy, especially since the 1990s, has been to involve women in microfinance programmes and help them acquire capital needed in production (Malhotra, 2002). In recent years there has been renewed attention on efforts to empower women involved in the agricultural sector, which employs the majority of rural people. The efforts include mobilizing rural women in producer and marketing groups for easy access to production inputs, extension services, training on increasing production per unit area as well as facilitating market access by smallholder farmers, men and women (URT, 2006). In order to improve market access by smallholder farmers, the Government and NGOs in Tanzania, as it is in many other developing countries, have adopted value chain approach as a holistic pro-poor approach to address constraints that smallholder farmers encounter.

Value chain has been defined differently by many authors; for example, Kaplinsky and Morris (2001) define a value chain as: "the full range of activities which are required to bring a product or service from conception, through different phases of production (involving a combination of physical transformation and the input of various producer

services), delivery to final consumers, and final disposal after use”. This is sometimes referred to as commodity chain, channel of distribution, trade channel, or supply chain. A value chain is made up of a series of actors (or stakeholders) from input suppliers, producers and processors, to exporters and buyers engaged in the activities required to bring agricultural product from its conception to its end use. Value chain development is a multiple and participatory process that leads to coordinated interventions; it is a deliberate development initiative to promote potential value chains in order to improve effective participation and benefits of the involved actors. Hobbs *et al.* (2000) define value chain as “a vertical or strategic network of independence between a number of independent business organisations within a supply chain”. The supply chain refers to the entire vertical chain of activities from production, through processing, distribution, and retailing to the consumer i.e. from gate to plate. A value chain is a network of strategic alliances between independent companies that together manage the flow of goods and services along the entire value-added chain (Holmlund and Fulton, 1999 cited in Hobbs *et al.*, 2000). The term “strategic” implies that the partnership is entered into deliberately by a group of people who jointly undertake activities that they could not do by themselves. In such alliances information that could not be accessed independently is gathered and shared.

In recent years the value chain approach has become one of such commonly used interventions by development organisations and government agencies to bring about women empowerment and reduce poverty (USAID, 2009). However, evidence from literature in relation to whether women’s involvement in agricultural value chains increases their decision making at household and community levels lacks consistency (Lastarria, 2006). And relatively less attention is paid to how gender issues affect value chain development. According to USAID (2009), gender issues affect and shape the

totality of production, distribution, and consumption within an economy, but have often been overlooked in value chain development. In the value chain, all activities from production, processing to disposal reflect gendered patterns of behaviour that condition men's and women's jobs and tasks. The resulting gender roles and relations affect the distribution of resources and benefits derived from income generating activities especially in the activities that women engage in.

Generally, value chain research and analysis deal with four important theoretical concepts that describe and analyse the vertical integration and disintegration of production and distribution processes: (i) "Filiere" concept, which is a static model describing the linear flow of physical inputs and services. The approach assumes static character/actors, and shows relation at a certain point in time; and (ii) Modern Value Chain Analysis concept (VCA) is an approach which describes how firms create values at different stages and emphasizes on vertical integration in linking upstream and downstream activities and actors in the chain (Davies and Ellis 2000; Roduner, 2004). Other items are: (iii) Global Commodity Chain concept (GCC) (Gereffi *et al.*, 2005) which is an approach that analyses power relations in coordination of globally dispersed, but linked production systems; and (iv) World Economic Triangle concept (Messner, 2002 cited in Roduner, 2004) which underscores the linkages between local and global commodity chains and the importance of vertical and horizontal integration.

While value chain interventions have been widely used as pro-poor approaches by development organisations and government agencies in many countries, its impact on poverty, gender and environment is difficult to generalize (Riisgaard *et al.*, 2010; Coles and Mitchell, 2011). Some studies have found that women's involvement in agricultural value chains does not always translate into women empowerment (Laven *et al.*, 2009;

Riisgaard *et al.*, 2010). Nevertheless, other scholars have found that women involvement in value chain development results into women empowerment at household and community levels (KIT *et al.*, 2006; Coles and Mitchel, 2011). These divergences in views call for further investigation. Furthermore, there is paucity between theoretical perspective and development practices on the outcome of value chain development between and among different actors. Theoretically, in Sub-Saharan Africa, women generally have the right to use products and income from their own economic activities. Nevertheless, “in practice they are often constrained to using them to meet their responsibilities for certain expenditures that are determined by their husbands or by prevailing male-enforced norms” (Dey, 1992 as cited in Coles and Mitchell, 2011: 6). In many instances, men, who own the productive assets and control their outputs, usually appropriate the income while women continue to provide the bulk of the labour (Dolan, 2001; Coles and Mitchel, 2011). While women involvement in production and marketing of agricultural products has increased (Lastarria, 2006), corresponding change in improved control of their income has remained largely uncertain.

The motivation for doing the research on women empowerment was derived from the researcher’s academic background and work experiences. Before joining Sokoine University of Agriculture (SUA) as an assistant lecturer in 2008 he worked for Oxfam in the Tanzania Scale up Programme (TASU) as a programme officer responsible for community empowerment. TASU was an initiative by Oxfam to assist smallholder farmers and producers to enhance their productivity in order to become food secure, empower men and women to participate in plans and decision making processes that affect their lives and improve trade and market links for products from smallholder farmers. TASU programme implemented this initiatives using value chain approach whereby four value chains were developed and supported, which were rice for local and export markets,

sisal, chickpea and local chicken for local markets. However, while implementing these value chain development initiatives the researcher could not have an opportunity to assess its impact on women empowerment. When he secured an opportunity for PhD research at SUA he was motivated to research on his long established interest in the linkage between value chain development initiatives and women empowerment. The research also compliments his teaching and professional career in gender and development at the University.

1.2 Problem Statement

In Tanzania, there are many value chain initiatives which focus on a few commodities in specific geographical areas (MMA, 2012). Most of these value chains focus on interventions on crops or commodities that have potential to increase income and reduce poverty. Some value chain interventions have special focus on improving the wellbeing of involved women, and special efforts have been made to involve more women in value chain development activities. Despite the interventions that focus on improving the wellbeing of women so as to empower them, women empowerment among those involved in value chain development activities in Tanzania is low (VECO, 2008). Men still dominate household decision making especially on access to and control of resources and on spending household income. Women freedom of movement is restricted by husbands and they have to seek permission from their husbands to visit some places. Therefore, there is a need to understand how women participation in value chain development empowers them.

In Simanjiro District, where this study was conducted, the District Council in collaboration with some NGOs in the District has embarked on developing market commodity chains that aim to empower smallholder farmers to participate actively and

profitably in the market transactions. The approaches have targeted crops which have potential to contribute significantly to household income. Therefore, onion was selected based on this merit. The initiative to develop the onion value chain has established production and marketing groups at village and ward levels for accessing production inputs, credits, extension services and marketing linkages. It is anticipated that women's participation in the value chain development activities would gradually generate reasonable incomes for the involved actors and bring a range of benefits that lead to their empowerment. Although women participation in the value chain development activities has increased, the impact of their participation on their empowerment is not well understood (Coles and Mitchel, 2011; Bolwig *et al.*, 2010; Laven *et al.*, 2009). As Coles and Mitchell (2011) argue, transformation of empowerment effects acquired at value chain level depends on complex socio-economic and cultural set ups and thus it is difficult to generalize. The focus of this study was to explore whether and to what extent women participation at various stages in the onion value chain has empowered them and to establish the determinants of women empowerment in the value chain.

1.3 Justification of the Study

Studies on women empowerment are scanty, geographically unevenly distributed and skewed focus-wise. Most of them have been on the impact of micro-credit or credit based micro-enterprises on women empowerment in South Asia, particularly in Bangladesh, India and Pakistan (Hashemi *et al.*, 1996; Malhotra *et al.*, 2002). It is imperative to find more evidence of women empowerment in agricultural value chains from other areas focusing on agricultural related activities in which women are the majority. While the current theoretical debates in value chain interventions are centred on the question of how to create and distribute gains from economic activities better (Roduner, 2004), relatively less attention has been paid to how participation in value chain development activities

empowers women. Few value chain studies have succeeded in explicitly documenting the impact of value chain activities on empowerment and gender (Riisgaard *et al.*, 2010). Generally, there is lack of clarity on whether and to what extent women participation in value chain development activities increases women choices, access to income accrued from the chain and increase in women decision making at household level. Despite several efforts that have been made to improve empowerment of women, there is scanty empirical information on women empowerment through participation in value chain development activities in the agricultural sector in which women are the majority. There is a need to inform policy makers on how women involvement in value chain development activities contributes to their empowerment, thus increase their potential to contribute to national development.

The findings from this study add new knowledge on gender and value chain, especially how gender roles and relations occur in value chain and how such changes are transformed at household level. They inform policy makers involved in planning and implementing development projects and programmes that aim to empower women. Women empowerment is a necessary condition for the attainment of the millennium development goal number three and Tanzania Development Vision (TDV) 2025 goal number one in which it's envisaged to eliminate gender disparities and increase share of women in wage employment as well as in non-agricultural sectors to ensure empowerment of women in all socio-economic and political relations and cultures by 2015 (URT, 2010b; URT, 2005; URT, 2000).

1.4 Objectives

1.4.1 General objective

The general objective of the study was to examine the impacts of women participation in onion value chain development activities on their empowerment.

1.4.2 Specific objectives

- i. To identify gender roles and relations in the onion value chain.
- ii. To determine the extent of women empowerment in onion value chain.
- iii. To analyse gender differences in control of income and assets accrued from onion value chains.
- iv. To analyse the determinants of women empowerment in onion value chain.

1.5 Research Questions and Hypotheses

This study sought to answer the following research questions:

- i. How does women participation in onion value chain development impact on women empowerment?
- ii. How do changes in gender roles and relations occur in onion value chain?
- iii. What gender issues in value chain development contribute to women empowerment? Women from low socioeconomic status are more likely to
- iv. What determine the transformation of empowerment changes occurring in value chain into women empowerment at household level?

1.5.1 Hypotheses

This study was also guided by two hypotheses:

- i. Women from low socioeconomic status are more likely to be categorized in low empowerment than those from high socio economic status

- ii. Women participating in onion value chain development activities are more likely to be empowered than non-participants

1.6 Conceptual Framework for the Study

The concept of empowerment and its measurement is multi-faceted; there are several frameworks for evaluating and measuring empowerment including those developed by Kabeer (1999), Narayan (2002; 2005, cited in Samman and Santos, 2009), Alsop *et al.*, (2006), CARE (Hill and Khan, 2008), Mayoux and Mackie (2008), KIT *et al.* (2006) and Laven and Verhart (2011). At their core, all these frameworks essentially evaluate three factors: agency, structure and relations (Fig. 1). Agency is the capacity of individual human to act independently and to make their own free choices; agency can be predicted by asset endowment. Structures are factors such as social class, religion, gender, ethnicity, custom etc. which limit or influence the opportunities that individuals have.

The agency and structure concepts are interrelated. Changes in agency can result into empowerment; this assumes that if business and financial services are provided, a woman can freely choose to use these services without facing any constraints posed by her family, community or class to market her products. Improvement in structure that enhances participation or market access can result into empowerment if equal opportunities in participation will always lead to equal outcomes. Therefore, human agency shapes and is in turn shaped by formal and informal rules and institutions which account for a certain positioning in the value chain and the outcomes of value chain interventions. Iterative relationship between agency and opportunity structure (Alsop *et al.*, 2006) builds relationships between and among actors involved in development intervention like value chain development interventions. Empowerment in value chain may occur when an individual or group builds relationships, joint efforts, coalitions, and mutual support, in

order to claim and expand agency to alter inequitable structures in order to realize their rights and maximize outcomes.

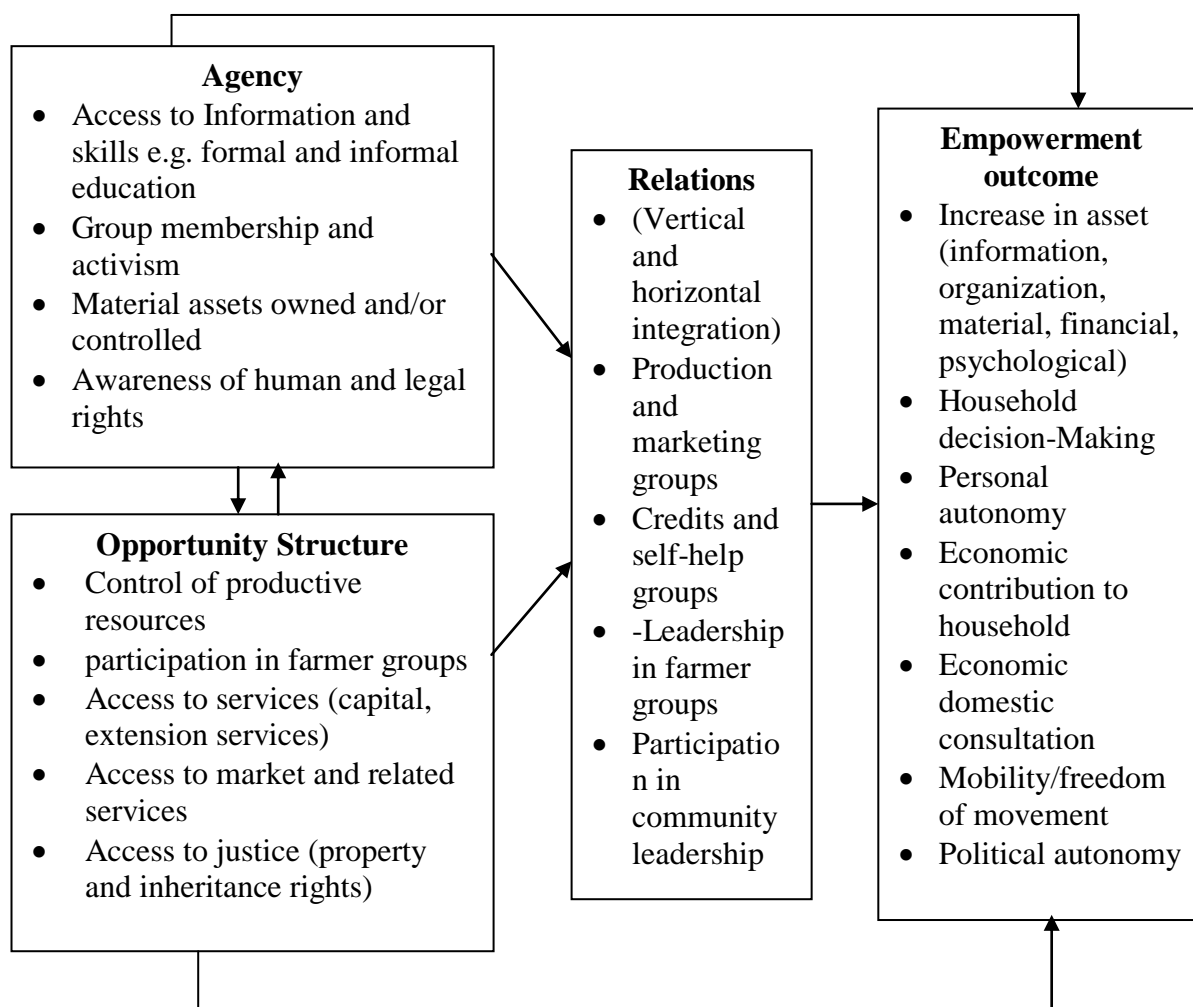


Figure 1: The conceptual framework used for the research

Source: Adopted from the works of Alsop *et al.* (2006) and Hill and Khan (2008)

1.7 Theoretical Framework for the Study

The conceptual framework presented in Figure 1 above is also in line with the structuration commonly referred to as duality of structure theory (Giddens, 1984 cited in Williams and Sewell, 1992), which contends that structure and interaction are mutually constitutive duality. According to Giddens (1984) as cited in Williams and Sewell (1992), structures are both the medium and the outcome of the practices which constitute social

systems. Structures shape people's practices, but it is also people's practices that constitute and/or shape structures. Therefore, as Alsop *et al.* (2006) argue, the iterative relationships between agency and structure are important in building relations and bringing about change in empowerment. The study examined whether value chain interventions have improved agency of the involved members and whether change in agency has influenced change in structure; hence, empowerment.

1.8 Organization of the Thesis

This thesis is organised in three chapters. The first chapter consists of the extended abstract and introduction of the overall theme studied; it offers a description of the commonality of concepts presented in separate papers. Chapter Two contains a series of originally published papers in different journals, and the last chapter presents conclusion and overall implication of the study findings.

REFERENCES

- Alsop, R., Bertelsess, M. and Holand, J. (2006). *Empowerment in Practice: From analysis to implementation*. Washington, DC, USA. 25pp.
- Barham, J. and Chitemi, C. (2009). Collective action initiatives to improve marketing performance: Lessons from farmer groups in Tanzania. *Food Policy* 34: 53 – 59.
- Basu, S. and Basu, P. (2001). Income Generation Program and Empowerment of Women– A case study in India, Charles Sturt University, Bathurst, NSW 2795, Australia. Cited in [http://crawford.anu.edu.au/acde/asarc/pdf/papers/conference/CONF2001_03.pdf] site visited on 13/3/2012.
- Bolwig, S., Ponte, S., du Toit, A., Riisgaard, L. and Halberg, N. (2010). Integrating poverty and environmental concerns into value-chain analysis: A strategic framework and practical guide. *Development Policy Review* 28(2): 173 – 194.
- Chaudhry, I. S. and Nosheen, F. (2009). The determinants of women empowerment in Southern Punjab Pakistan: An empirical analysis. *European Journal of Social Sciences* 10: 216 – 229.
- Coles, C. and Mitchell, J. (2011). *Gender and Agricultural Value Chains: A Review of Current Knowledge and Practice and their Policy Implications*. ESA Working Paper No. 5. Agricultural Development Economics Division of Food, Rome Italy. 14pp.

- Davies, H. and Ellis, P. D. (2000). Porter's competitive advantage of Nations: Time for a final judgment? *Journal of Management Studies* 37(8): 1189 – 1213.
- Dolan, C. S. (2001). The good wife: Struggles over resources in the Kenyan horticulture sector. *Journal of Development Studies* 37(3): 39 – 70.
- Gereffi, G., Humphrey, J. and Sturgeon. T. (2005). The governance of global value chains. *Review of International Political Economy* 12(1): 78 –104.
- Hashemi, S. M., Schuler, S. N. and Riley, A. P. (1996). Rural credit programs and women's empowerment in Bangladesh. *World Development* 24(4): 635 – 653.
- Hill, C. and Khan, M. (2008). A place to glow: Bringing women to the CARE's agricultural programmes. Conceptual underpinning and assessment framework. [www.pqdl.care.org/sii] site visited on 4/6/2011.
- Hobbs, J.E., Cooney, A. and Fulton, M. (2000). *Value Chains in the Agri-Food Sector: What are they? How do they work? Are they for me?* University of Saskatchewan 51 Campus Drive, Saskatoon SK S7N 5A8, Canada pp.1-6.
- Kabeer, N. (1999). Resources agency achievements: Reflections on the measurement of women's empowerment. *Development and Change* 30(3): 435 – 464.
- Kaplinsky, R. and Morris, M. (2001). *A Handbook for Value Chain Research*. [www.srp-guinee.org/download/valuechain-handbook.pdf] site visited on 5/4/2012.

KIT, Agri-ProFocus and IIRR (2012). *Challenging Chains to Change: Gender Equity in Agricultural Value Chain Development*. Royal Tropical Institute. KIT Publishers, Amsterdam. 24pp.

KIT, Faida MaLi and IIRR (2006). *Chain Empowerment: Supporting African Farmers to Develop Markets*. Royal Tropical Institute, Amsterdam. Faida Market Link, Arusha. International Institute of Rural Reconstruction, Nairobi, Kenya. 31pp.

Lastarria, C. S. (2006). *Feminization of Agriculture: Trends and driving forces*. Background Paper for the World Development Report 2008. International Development Research Centre, Ottawa, Canada No. 41367. 22pp.

Laven, A. and Verhart, N. (2011). Addressing gender equality in agricultural value chains: On track with gender. [www.ontrackwithgender.nl] site visited on 30/6/2011.

Laven, A., van Eerdewijk, A., Senders, A., van Wees, C. and Snelder, R. (2009). *Gender in Value Chains Emerging Lessons and Questions*. A Working Paper KIT, CIDIN, HIVOS, Agri-ProFocus and ICCO, Arnhem, Netherlands. 13pp.

Makombe, A. I. M. (2006). Women entrepreneurship development and empowerment in Tanzania: The case of SIDO/UNIDO – supported women micro-entrepreneurs in the food processing sector. Thesis for Award of PhD Degree at University of South Africa, South Africa, 197pp.

- Malhotra, A. (2002). Measuring Women's Empowerment as a Variable in International Development. Background Paper Prepared for the World Bank Workshop on Poverty and Gender: New Perspectives. Cited in [www.Worldbank.org/poverty/empowerment/events/feb03/malhotra2/pdf] site visited on 12/7/2011.
- Mayoux, L. and Mackie, G. (2008). *Making the Strongest Links: A practical guide to mainstreaming gender analysis in value chain development*. International Labour Office, Addis Ababa, Ethiopia. 9pp.
- MMA (2012). *Scoping Study on Value Chain Initiatives and Studies in Tanzania*. A Consultancy Report for Irish Aid and DANIDA, Dar es Salaam 59pp.
- Mnenwa, R. and Maliti, E. (2010). *Comparative Analysis of Poverty Incidence in Farming Systems of Tanzania*. Special Paper No. 4. REPOA, Dar es Salaam, Tanzania. 14pp.
- Oxfam (2011). Gender equality: It's your business. Briefings for business 7. [<http://tinyurl.com/6p29zwq>] site visited on 23/11/2012.
- Oxfam GB (2005). Capacity building for empowerment. *Report of a Workshop Held in Jinja, Uganda, 6 – 8 March 2005*. 7pp.
- Riisgaard, L., Bolwig, S., Ponte, S., du Toit, A., Halberg, N. and Matose, F. (2010). Integrating poverty and environmental concerns into value-chain analysis: A Strategic framework and practical guide. *Development Policy Review* 28(2): 195 – 216.

- Roduner, D. (2004). *Report on Value Chain Analysis: Analysis of existing theories, methodologies and discussions of chain approaches*. The Development Cooperation Sector, LBL, Bern, 18pp.
- Samman, E. and Santos, E. M. (2009). *Agency and Empowerment: A review of Concepts, Indicators and Empirical Evidence*. A paper prepared for the 2009 human development report in Latin America and the Caribbean. Oxford Poverty and Human Development Initiative, Department of International Development, Queen Elizabeth House University of Oxford. 17pp.
- URT (2000). *Women and Gender Development Policy*. Ministry of Community Development, Women Affairs and Children, Dar es Salaam, Tanzania. 19pp.
- URT (2005). *National Strategy for Gender Development*. Ministry of Community Development, Gender and Children, Dar es Salaam, Tanzania. 15pp.
- URT (2006). *Agricultural Sector Development Programme*. Ministry of Agriculture Food Security and Cooperative, Dar es Salaam, Tanzania. 5pp.
- URT (2010a). *Gender Indicators Booklet*. Tanzania Poverty Eradication and Economic Empowerment Division, Dar es Salaam, Tanzania. 10pp.
- URT (2010b). *National Strategy for Growth and Reduction of Poverty*. Ministry of Finance and Economic Affairs, Dar es Salaam, Tanzania. 19pp.

URT (2010c). *Impact Assessment of Participatory Agricultural Development and Empowerment Project*. A Consultancy Report to the Ministry of Agriculture Food Security and Cooperative, Dar es Salaam, Tanzania. 15pp.

USAID (2009). *Promoting Gender Equitable Opportunities in Agricultural Value Chains: A Handbook*. USAID, 1300 Pennsylvania Avenue, New York, Washington, DC. 38pp.

VECO (2008). *Programme Document: Revised Proposal for Social and Economic Empowerment Programme for Simanjiro and Same Districts*. SEEP for SiSa, Kilimanjaro, Tanzania. 33pp.

Wallerstein, N. (2006). What is the evidence on effectiveness of empowerment to improve health? Health evidence network report. [<http://www.euro.who.int/document/E88086.pdf>] site visited on 15/12/2012.

Williams, H. and Sewell, Jr. (1992). A theory of structure: Duality, agency and Transformation. *American Journal of Sociology* 98 (1): 1 – 29.

World Bank (2002). Empowerment and poverty reduction: A source book. [www.handicap-international.fr/bibliographie./NARAYAN_draft.pdf] site visited on 6/4/2012.

World Bank (2003). *Gender Equality and the Millennium Development Goals*. Gender and development group. World Bank, Washington, DC. 20pp.

CHAPTER TWO

PAPER ONE

Mapping Gender Roles and Relations along Onion Value Chain in Tanzania

John Jeckoniah¹, Ntengua Mdoe² Carolyne Nombo¹

¹ Development Studies Institute, Sokoine University of Agriculture P.O. Box 3024,
Morogoro, Tanzania

² Department of Agricultural Economics and Agribusiness, Sokoine University of
Agriculture P.O. Box 3000, Morogoro, Tanzania

Corresponding authors email: jjeckoniah@yahoo.co.uk

Published in the International Journal of Asian Social Science, Vol. 3, No. 2

pp. 523-541

PAPER TWO

Women empowerment in agricultural value chains: voices from onion growers in northern Tanzania

John Jeckoniah¹, Carolyne Nombo² Ntengua Mdoe³

¹ Development Studies Institute, Sokoine University of Agriculture P.O. Box 3024,
Morogoro, Tanzania

² Development Studies Institute, Sokoine University of Agriculture P.O. Box 3024,
Morogoro, Tanzania

³ Department of Agricultural Economics and Agribusiness, Sokoine University of
Agriculture P.O. Box 3000, Morogoro, Tanzania

Published in the Journal of Research on Humanities and Social Sciences,

Volume 2 (8) 2012:54-59

PAPER THREE

**Socio-economic Status and Women Empowerment in Rural Tanzania:
A Case of Onion Value Chain in Simanjiro District**

John Jeckoniah¹, Carolyne Nombo¹Ntengua Mdoe²

¹ Development Studies Institute, Sokoine University of Agriculture P.O. Box 3024,
Morogoro, Tanzania

² Department of Agricultural Economics and Agribusiness, Sokoine University of
Agriculture P.O. Box 3000, Morogoro, Tanzania

Corresponding authors email: jjeckoniah@yahoo.co.uk

Accepted for Publication in the Tanzania Journal of Development Studies

Vol.12 No. 2, 2012

Abstract

Literature on the link between women empowerment and their socioeconomic status is inconclusive. Many development organisations' efforts to empower women focus on increasing their participation in income generating activities in order to improve their socioeconomic status. The study was conducted in Simanjiro District to explore the linkage between women socioeconomic status and their empowerment, a comparison was made between participant and no participant to onion value chain. The study adopted a cross-sectional research design, and a total of 402 women completed the household questionnaires which were supplemented with focus group discussions and key informants interviews. Principal Component Analysis (PCA) using SPSS version 16 was applied to the socioeconomic data to obtain index as a proxy for household socioeconomic status. A composite women empowerment index was constructed to gauge women empowerment in different spheres, and F-test was used to determine the relationship between women socioeconomic status and their empowerment. The study found that many respondents were categorized into low to medium levels of empowerment. Relatively high levels of empowerment were found in aspects of household economic consultation, freedom of movement and political autonomy. Asset ownership and housing conditions revealed that the poorest were below average for most of the items or services to which the better off had access or possessed. The relationship between socio-economic status and women empowerment was statistically significant ($P < 0.05$), implying that efforts to improve women's wellbeing that focus on income and asset accumulation have the potential to empower women; therefore government, nongovernmental organisations and development programmes espousing to empower women should improve their approaches to ensure the poorest also gain opportunities to participate.

1.0 BACKGROUND INFORMATION

Women participation in income generating activities (IGAs) especially in Third World countries has been a central focus on efforts to empower women. Government and non-governmental organisations for many years have encouraged women to undertake IGAs so as to gain income and assets of their own for supplementing their household income and improve their standard of living. Despite such efforts, it is argued that those economic and social development efforts had not benefitted women as much as men (Mbilinyi, 1992 cited by Makombe *et al.*, 1999). Many studies have been conducted to assess the impact of women's participation into IGAs onto their empowerment. Some scholars have found positive impacts both on household outcomes such as income, wealth and asset accumulation and on individual outcomes like employment, health and nutrition (Baden and Green, 1994 cited by Parvin *et al.*, 2005, Makombe, 2006; KIT *et al.*, 2006; Shackleton *et al.*, 2011). Nevertheless, negative impacts have also been reported (Hashemi *et al.*, 1996, Mayoux 1999; Mayoux, 2000).

Oakes and Rossi (2003) define socio-economic status as “differential access to (realized and potential) desired resources”. The authors further argue that the resources fall into three distinct domains: (i) material endowments e.g. earned income, investment income and real property, (ii) Skills abilities and knowledge, and (iii) One's social networks. Therefore, the task of measuring socio economic status according to Oakes and Rossi (2003) seems to be reduced to identifying appropriate indicators for each of the domains and summarizing them at the level of individual or community. Other authors, e.g. Krieger, William and Moss (1997) cited in INDEPTH (2005) argue that the term socio economic status blurs the distinction between two aspects of socio-economic position which are actual resources and status, hence confusing. In actual practice, it is difficult to generate and measure all potential indicators in the three proposed domains. This study

adopts the Oakes and Rossi (2003) definition of socio-economic status and uses the method proposed by Filmer and Pritchett (2001) whereby assets are used to generate wealth quintiles as proxy for household socioeconomic status.

Literature on social and economic development has established that there are gender differences in how goods and services that result in the well-being of household members are valued (Katz *et al.*, 2007). It is also hypothesized that the income that women earn from their productive activities increases status and power of women to acquire assets and services that are important to them. According to Morris (2005), there are four commonly used methods in measuring socio-economic status, where a single composite index is developed: (i) Proxy Means Test (Grosh and Baker, 1995 cited in INDEPTH Network, 2005). This method uses per capita consumption or income. (ii) Principal Component Analysis (Byaman and Cramer, 2001 cited in INDEPTH Network, 2005) which was popularised by Filmer and Pritchett (2001). This method uses assets to generate wealth quintiles as proxy for household socioeconomic status. Other methods are those proposed by Ferguson *et al.* (2003) cited in INDEPTH (2005) which uses permanent income and Oakes and Ross (2003) who focus on social norms as the gold standard of social economic status whereby an individual assign socio-economic scores which are used in final selection of weights.

Several studies have used assets ownership, housing quality and sanitation as proxies for household socioeconomic status (Mwageni *et al.*, 2005; Nathan *et al.*, 2005; Sikira *et al.*, 2010). A change in socio-economic status provides direct and indirect benefits to individuals and households including: improved living conditions, protection during emergencies and collateral for credits that can be used for investment or consumption (Doss *et al.*, 2008). Many studies conducted on exploring the linkage between socio-

economic status and women empowerment have focused on access to and involvement in micro-credits projects as a source of income generating activities. Scanty information exists on the linkage between women participation in agricultural markets and related activities and women empowerment. Furthermore, the studies on the linkage between micro-credit and empowerment are geographically skewed to South Asian countries especially in Bangladesh, Pakistan and India. Experience from South Asian countries on the impact of microfinance on women empowerment has been replicated in other parts of the world (Hunt and Kasynathan, 2001). It is imperative to find empirical evidence in other locations as Coles and Mitchel (2011) suggest that factors responsible for women empowerment are affected by locations specific socio cultural contexts.

In Tanzania, as it is in many other developing countries, efforts to empower women have been focusing on improving women status through education, training, access to health, and family planning services as well as legal counseling and support. Many development programmes and projects espousing for women empowerment emphasize on increasing women's access to income, participate in decision making, control over assets and resources. For example women economic empowerment through microfinance and micro credit services programmes has become a popular approach since the 1990s (Malhotra *et al.*, 2002). Women participation in productive and market activities such as value chain development activities is anticipated to result into a range of benefits to involved women and may impact on their empowerment. Agriculture and its related activities have been identified as national mainstay and an engine for economic growth in Tanzania; given that women are the majority of agricultural producers, it is important to understand means to empower them. This study sought to examine the link between socioeconomic status and women empowerment in onion value chain development activities so as to draw lessons

for government and non-governmental organisations involved in women empowerment in agricultural related livelihood.

2.0 METHODOLOGY

2.1 Description of the Study Area

The study was conducted in Simanjiro District located in Manyara Region in Tanzania. The District has both government and Non-Governmental Organisations promoting onion production and marketing using value chain approach. There are many farmer groups organized for onion production and marketing in which women are the majority.

2.2 Data for the Study

The study adopted a cross-sectional research design, whereby data were collected only once. Eight villages were selected purposively from four wards. The sampling unit for this study was the individual women participating and those not participating in onion value chain development activities. The interviewed women represented their households which were used as the unit of analysis in developing wealth quintiles as a proxy for households' socioeconomic statuses. Data were collected between October, 2011 and February, 2012. Multistage sampling procedure was used. Villages that had farmer groups that were actively engaged in onion value chain development activities were purposively selected. Systematic sampling technique was used to obtain respondents involved in the onion value chain development activities based on the sampling frame which was the names of registered participants in different farmer groups involved in onion value chain development activities. Simple random sampling technique was used to obtain a comparative sample of respondents who were not participating in the value chain development activities.

Household survey was conducted in all eight villages; a structured questionnaire was used, and 402 respondents participated in this study, 207 (51.2%) of whom were participating in onion value chain development activities and 195 (48.5%) were non-participants. Qualitative data were collected using focused group discussions and key informant interviews. Household survey captured socioeconomic information, ownership of assets, involvement in onion value chain and profitability analysis in the onion value chain, the information was also used for the construction of the women empowerment indices.

Focus group discussions, which composed of between six and eleven people was also used for data collection for this study. During focus group discussions, women's perceptions on issues related to benefits accrued from onion value chains; changes in men's and women's roles in production and marketing of onions, ownership of assets, income and money accrued from onions were discussed. Other issues explored included factors promoting or hindering women's decision making, men's attitude towards women's voice and leadership, household decision making, women's freedom of movement, group networks and interactions, political activities and changes in livelihood were discussed.

2.2.1 Household socio-economic status index

Principal Component Analysis (PCA) using SPSS version 16 was applied to the socio-economic data to obtain index as a proxy for household socioeconomic status. PCA involves breaking down variables like assets (radio, solar panel, water pump etc) or access to service in a household (water, toilet) into categorical or interval variables (Mwageni *et al.*, 2005, Nathan *et al.*, 2005). In this study, household assets, housing conditions, water and sanitation were the main variables used for construction of socioeconomic status index. The variables were then processed in order to obtain weights and principal

components. The results obtained from the first principal component (explaining the most variability) were used to develop an index based on the formula:

$$A_j = f_1 \times (a_{j1} - a_1) / (S_1) + \dots + f_N \times (a_{jN} - a_N) / (s_N) \quad (\text{Filmer and Pritchett, 1998 cited by Mwageni } et al., 2005).$$

Where:

A_j = Index developed

x = the variable

a_1 = mean

f_1 = scoring factor

a_j = the value for the asset or service

S_1 = standard deviation

Based on this formula, indices of each household were calculated and the resulting population was divided into wealth quintiles; five indices were prepared and used as proxies for socio-economic status in which the first quintile represented the poorest while the fifth quintile represented the well off. Two statistical measures of inequality were used; one was the poorest/well-off ratio which compares the rate prevailing in the poorest and well-off quintiles. The second was a trend test (Chi Squares) to determine the significance in the inequality.

2.2.2 Measurement of women empowerment

Women empowerment was measured by developing women empowerment index (WEI). Cumulative/Composite Empowerment Index (CEI) was constructed based on the WEIs from different spheres. Six indicators of women's empowerment were measured, hence six indices: Person Autonomy Index (PAI), Household Decision-making Index (HDMI),

Economic Contribution to Household Income (ECHI), Economic Domestic Consultation Index (EDCI), Freedom of Movement Index (FMI) and Political Autonomy Index (PoAI). The respondents were requested to indicate their degree of involvement in issues related to each particular index, and the scores obtained were used to develop these indices.

3.0 RESULTS AND DISCUSSION

3.1 Asset Ownership

During focus group discussion which preceded household surveys, the respondents were requested to state the assets which connote wealth status in their area. Only assets voted for by the majority were included in the survey questionnaire. Table 1 present these findings whereby assets owned by the respondents were disaggregated by their involvement in onion value chain development activities. According to Table 1, there is difference in asset ownership, except for Television set and sewing machine which were more owned by those not participating in onion value chain. In all other assets women participating in onion value chain activities had more assets than their counterparts.

Table 1: Assets Owned by respondent household

Assets Owned by respondent household	Percent (n=402)		
	OVC Participant	OVC non-participant	All
Radio	84.4	73.6	79.1
Solar panel	7.3	1.0	4.3
Bicycle	53.2	31.4	42.6
Motor bike	16.1	5.7	11
Car/tractor/power tiller	1.5	2.1	1.8
Functioning Telephone/mobile	78.5	67.5	73.2
Television set (TV)	10.8	12.4	11.6
Sewing machine	4.9	7.2	6.0
Satellite dish	5.9	4.1	5.0
Foam mattress	54.1	40.7	47.6
Water pump	11.2	6.2	8.8
Land	74.1	57.2	65.9
Wooden bed and mattress	73.7	66.5	70.2
Goat	37.6	19.1	26.8
Cattle	18.1	13.4	15.8

3.1.1 Housing conditions

The study reveals that majority of the respondents (71.8%) were living in the houses that they owned. The differences in quality of houses were also small; this may be due to the fact that most of the households found in the surveyed villages were made of cheap and locally available materials which indicate the level of poverty prevailing in many rural areas of Tanzania. For example 48.9% of the houses had thatch grass roof, and 70% had mud floor. This implies that most of the respondents still faced high level of poverty.

Table 2: Housing conditions

Category	Percent (n = 402)		All
	OVC Participant	OVC non-participant	
House ownership			
Yes	75.5	68.0	71.9
No	24.5	32.0	28.1
Wall			
Unburned bricks/mud	72.2	76.4	74.2
Burnt brick	24.2	19.8	22.1
Cement brick	3.5	3.3	3.4
Tin	0.0	0.5	0.3
Roof			
Corrugated iron sheets	46.5	54.4	50.3
Thatch grass/mud	52.5	45.1	48.9
Tiles	0.5	0.5	0.5
Tin	0.5	0.0	0.3
Floor			
Soil/earth/sand	75.6	65.2	70.6
Cement	23.4	33.1	28.0
Ceramic tiles	1.0	1.7	1.3

3.1.2 Water and Sanitation

The majority of the respondents (63.8%) depended on unprotected open well water sources, which might have ill health impact. It was anticipated that the benefits women derive due to their participation in onion value chain would help them to improve the living standards by acquiring ability to afford paying for other improved social services. But, according to Table 3, there was clear difference in access to water, whereby women not participating in onion production activities were more likely to have more access to secure sources of water than their counterparts. This implies that participation in onion value chain did not have big impact on access to secure water source.

Table 3: Source of Water and Sanitation

Category	Percent (n = 402)		
	OVC Participant	OVC non-participant	All
Source of water for drinking			
Open well/pond or river	78.9	47.9	63.8
Public tape	14.7	32.5	23.4
Water kiosk	4.4	14.4	9.3
Piped into yard house	1.0	3.6	2.3
Own piped into the household	1.0	1.5	1.3
Toilet facilities			
Traditional pit toilet	88.2	81.2	84.8
Own flush toilet	4.4	6.8	5.6
No toilet at the HH	2.9	5.8	4.3
Shared flush toilet	3.4	5.2	4.3
Ventilated improved pit (VIP)	1.0	1.0	1.0

3.1.3 Source of energy for cooking

As it is in most rural areas in Tanzania, majority of the respondents (87.9%) depend on firewood for cooking. Although this has a negative impact on the environment, it is the

only available and affordable source of energy for most poor people especially in rural areas. In the 2007 Tanzania household budget survey estimated that about 73% of rural households depend on firewood as their main source of energy for cooking. Therefore, firewood consumption for cooking in Somanjiro District is above the national average (NBS, 2012). Such higher dependence on fuel wood as the main source of energy has implication on environmental degradation. Kerosene was second in importance as a source of energy, and it was used by only 11.1% of the respondents, as presented in Table 4.

Table 4: Source of energy for cooking

Category	Percent (n = 402)		All
	OVC Participants	OVC non-participants	
Source of energy for cooking			
Firewood	90.6	85.1	87.9
Kerosene	8.4	13.9	11.1
Electricity	0.5	0.5	0.5
Charcoal	0.5	0.5	0.5

3.2 Assets and Housing Ownership

Results in Table 5 show that the poorest were below average in most of the items or services to which the better off had access or possessed. For example, in terms of asset ownership only about ten percent (9.8%) from the poorest category had radios compared to 20.1% in the well off category. The same observation applies to motorcycles, mobile telephones, television sets, mattresses and ownership of animals whereby the well off were more likely to possess more assets than the poorest. A sharp contrast was observed to bicycle ownership whereby the least poor had more ownership than the well off. A similar trend have also been reported by Masengi (2005); this might be due to the fact that in the study area, given its geographical position and remoteness, bicycle is the common form of

transport used in most productive activities hence more important to the poor who do not have other means of transport. The Chi Square (X^2) statistic indicated a significant relationship ($P < 0.05$) in the distribution of assets between poor and well off for: radio, solar panel, bicycle, television, mattress, land, wooden bed, goat and cattle implying that there was inequality in ownership of these assets between poor and well off individuals. Vyas and Kumaranayake (2006) cited by Sikira *et al.* (2010) report that in principal component analysis variables with positive signs on the factor scores are related with high socioeconomic status while those with negative signs on factor scores are associated with lower socioeconomic status.

Like asset ownership, housing conditions relate to socioeconomic status of the household. A similar trend, which is also consistent on the scores on the index, has been observed (Table 5). Chi Square (X^2) statistic indicates significant relationship ($P < 0.05$) on the ownership of house, number of sleeping rooms in the houses, whether the house walls were made with burnt bricks or mud, tiles roof and type of toilet facility owned, implying that inequality existed between poor and well-off individuals based on these housing conditions and access to services. Despite the fact that onion value chain intervention in the area has brought much benefit, this finding informs us that income distribution was still uneven.

Table 5: Distribution of assets and housing condition by quintiles (%)

Assets owned in the household	Quintiles (Percent N=402)					Mean	1 st /5 th	(X ²) Sig.
	1 st	2 nd	3 rd	4 th	5 th			
Radio	9.8	13.8	16.8	18.6	20.1	15.82	0.49	0.000
Solar panel	0.3	0.3	0.3	0.5	3.0	0.88	0.10	0.000
Bicycle	11.0	10.0	8.0	8.5	5.0	8.50	2.20	0.002
Motor bike	1.8	1.5	2.3	2.8	2.8	2.24	0.64	0.604
Car/Tractor/Power tiller	0.0	0.0	0.5	0.5	0.8	0.36	0.00	0.273
Telephone/mobile	13.0	14.0	14.0	16.3	15.8	14.62	0.82	0.153
Television set (TV)	1.5	1.5	2.3	2.0	4.3	2.32	0.35	0.044
Sewing machine	1.0	1.0	0.8	1.3	2.0	1.22	0.50	0.551
Satellite dish	0.5	0.3	1.0	1.3	2.0	1.02	0.25	0.106
Foam mattress	7.0	8.3	9.3	11.3	11.8	9.54	0.59	0.008
Water pump	1.8	1.8	1.3	1.5	2.5	1.78	0.72	0.718
Land	5.3	12.0	15.5	15.5	17.5	13.16	0.30	0.000
Wooden bed and mattress	11.5	13.3	14.8	15.0	15.5	14.02	0.74	0.026
Goat	1.0	1.5	2.5	8.0	15.5	5.70	0.06	0.000
Cattle	0.0	0.5	0.5	3.8	11.1	3.18	0.00	0.000
Own a house	10.8	15.6	13.6	15.3	16.6	14.38	0.65	0.000
1-2 Sleeping rooms	14.7	15.7	14.4	14.7	16.4	15.18	0.90	0.005
3-4 Sleeping rooms	2.7	3.0	2.0	7.7	6.7	4.42	0.40	0.004
5+ Sleeping rooms	0.0	0.0	0.3	0.7	0.7	0.34	0.00	0.696
Burnt bricks wall	2.7	2.7	3.7	5.2	5.7	4.00	0.47	0.050
Cement bricks wall	0.2	0.5	0.5	0.7	1.2	0.62	0.17	0.447
Un burnt brick wall	15.7	11.7	13.7	13.5	15.5	14.02	1.01	0.020
Thatch grass roof	13.2	8.9	9.2	8.9	8.7	9.78	1.52	0.014
Tin roof	0.0	0.2	0.0	0.0	0.0	0.04	0.00	0.410
Tiles roof	6.1	10.2	10.2	12.3	12.3	10.22	0.50	0.003
Ceramic floor	0.3	0.0	0.3	0.0	0.8	0.28	0.38	0.219
Cement floor	3.4	6.3	6.3	6.9	5.0	5.58	0.68	0.122
Soil/earth floor	15.9	15.1	13.0	14.0	12.7	14.14	1.25	0.220
If the household uses								
Charcoal	1.0	2.3	1.8	2.8	3.3	2.24	0.30	0.209
Kerosene	0.0	0.0	0.0	0.0	0.5	0.10	0.00	0.093
Electricity	0.0	0.0	0.0	0.3	0.3	0.12	0.00	0.551
If the household water source is								
Piped into house	0.0	0.0	0.3	0.5	0.5	0.26	0.00	0.409
Piped into yard house	0.3	0.5	0.5	0.5	0.5	0.46	0.60	0.977
Public tap use	4.5	6.0	4.8	4.5	3.5	4.66	1.29	0.493
Water kiosk	1.8	1.0	2.0	2.0	2.5	1.86	0.72	0.562
Open well source	13.1	12.3	12.1	12.8	13.6	12.78	0.96	0.894
If the household's toilet is								
Flush toilet	1.0	0.3	1.0	1.5	1.8	1.12	0.56	0.287
Shared flush	0.3	1.3	1.0	1.0	0.8	0.88	0.38	0.593
Traditional pit	16.2	15.7	17.5	16.5	19.0	16.98	0.85	0.020
VIP	0.0	0.3	1.0	1.5	2.5	1.06	0.00	0.003
Bush /No toilet facilities	2.5	1.0	0.0	0.8	0.8	5.10	1.02	0.000

3.3 Extent of Women Empowerment

It is argued that, if women are empowered in one aspect of their life, empowerment in some other aspects does not necessarily follow (Malhotra *et al.*, 2002; Mason, 2005; Alkire, 2008). This study found that women were categorised into different levels of empowerment in different aspects. Overall, many respondents were categorized into low to medium level of empowerment. Relatively high levels of empowerment were found in aspects of household economic consultation, freedom of movement and political autonomy. Table 6 presents this finding. This finding is comparable to observation by Mason (2005) who found that women in Kumasi, Ghana are powerful economically but they are sexually and socially submissive to their husbands in the domestic arena and do not actively engage in political processes. Inconsistent empowerment outcome in different spheres have also been reported in different Asian countries (Jejeebhoy, 2000). A comparison between women participating into onion value chain and non-participants revealed that women participating in onion value chain development programme were more likely to be classified into high level of empowerment than their counterparts. The noted differences may be related to the impact of onion value chain development activities in women empowerment.

Table 6: Extent of Women Empowerment

Variable Level of empowerment	Percent (n=402)		
	Value Chain Participants	Non Value Chain Participants	All
Low empowerment	34.3	49.2	41.5
Medium empowerment	24.2	25.1	24.6
High empowerment	41.5	25.6	33.8

3.4 Socioeconomic Status and Women Empowerment

It was hypothesized that women from high socioeconomic status are more likely to be categorized into high levels of empowerment. In order to determine the differences in levels of women empowerment and level of socio-economic status on women empowerment, the mean scores on socioeconomic status index (wealth quintile) were compared with empowerment outcomes in different aspects using one way of analysis of variance (ANOVA). Table 7 presents this finding. The F-test statistical results showed significant association ($P < 0.05$) between socio-economic status and women empowerment. Thus, the hypothesis that women from low socio-economic statuses are more likely to be categorized into low levels of empowerment is confirmed.

Table 7: Socioeconomic Status and Women Empowerment

Socio-economic status index	Mean Score	P
1 st Quintile	1.7625	0.019
2 nd Quintile	2.0988	
3 rd Quintile	1.9630	
4 th Quintile	2.0500	
5 th Quintile	1.7375	
Index Mean	1.9229	

Further analysis and comparison (Table 8) reveals that the relationship between socioeconomic status and women empowerment were significant for some aspects only e.g. personal autonomy, economic domestic consultation and political autonomy. The relationship was significant for aspects such as personal autonomy, domestic consultation and political autonomy and insignificant for the rest of other aspects implying that women empowerment was appreciated in some spheres only. This finding agrees with Malhotra *et al.* (2002), Mason (2005), and Alkire (2008) who also argue that

empowerment occurring in one aspect does not necessarily trickle down to all other aspects. The relationship between socioeconomic status and household decision making was not statistically significant. This connotes lack or low levels of transformation in gender relations which is an important component for empowerment.

Table 8: Mean Comparison of Socioeconomic Status and Women Empowerment

Empowerment		Sum of Squares	DF	Mean Square	F	Sig.
Personal autonomy index	Between Groups	9.741	4	2.435	3.510	0.008
	Within Groups	275.415	397	0.694		
	Total	285.157	401			
Household decision making index	Between Groups	3.994	4	0.999	1.687	0.152
	Within Groups	234.914	397	0.592		
	Total	238.908	401			
Household economic contribution index	Between Groups	2.955	4	0.739	1.114	0.349
	Within Groups	263.244	397	0.663		
	Total	266.199	401			
Economic domestic consultation index	Between Groups	7.750	4	1.937	2.944	0.020
	Within Groups	261.228	397	0.658		
	Total	268.978	401			
Freedom of movement index	Between Groups	2.775	4	0.694	1.058	0.377
	Within Groups	260.163	397	0.655		
	Total	262.938	401			
Political autonomy index	Between Groups	10.912	4	2.728	3.716	0.006
	Within Groups	291.466	397	0.734		
	Total	302.378	401			

4.0 CONCLUSION AND RECOMMENDATIONS

The results have shown a relationship between socioeconomic status and women empowerment with particular focus on differentials between the women participating in onion value chain development activities versus non-participants as well as the

relationship and distribution of assets between poorest and well off. The association between socioeconomic status and empowerment suggests that efforts to improve women's wellbeing that focus on income and asset accumulation have the potential to empower women; therefore government, non-governmental organisations and development programmes espousing to empower women should improve their approach to ensure the poorest also gain opportunity to participate in these initiatives. Furthermore, it is suggested that programmes should use holistic approaches to women empowerment and not focusing on some few aspects only.

REFERENCES

- Alkire, S. (2008). *Concepts and Measures of Agency*. OPHI Working Papers No. 10. University of Oxford. 11pp.
- Coles, C. and Mitchell, J. (2011). *Gender and Agricultural Value Chains: A Review of Current Knowledge and Practice and their Policy Implications*. ESA Working Paper No. 5. Agricultural Development Economics Division of Food and Agriculture Organization of the United Nations (FAO), Rome, Italy. [www.fao.org/economic/esa] site visited on 16/4/2011.
- Doss, C., Grown, C. and Deere C. D. (2008). *Gender and Asset Ownership: A guide to collecting individual-level data*. World Bank Policy Research Working Paper No. 4704. Washington, DC. 5pp.
- Filmer, D. and Pritchett, L. (2001). Estimating wealth effects without expenditure data or tears: An application to educational enrolments in states of India. *Demography* 38(1): 115 – 132.
- Hashemi, S. M., Schuler, S. R. and Ann, P. (1996). Rural credit programmes and women's empowerment in Bangladesh. *World Development* 24(4): 635 – 653.
- Hunt, J. and Kasynathan, N. (2001). Pathways to empowerment Reflections on microfinance and transformation in gender relations in South Asia. *Gender and Development* 9(1): 42 – 52.

- INDEPTH Network (2005). *Measuring Health Equity in Small Areas: Findings from demographic surveillance system*. Ashgate Publishing Company, USA. 11pp.
- Jejeebhoy, S. J. (2000). *Women's Autonomy in Rural India: Its Dimensions, Determinants and the Influence of Context*. In Presser, H. and Sen, G. *Women's empowerment and demographic processes: Beyond Cairo*, Oxford University Press, New York. 232pp.
- Katz, J., West, Jr., K. P., Pradhan, E. K., Leclercq, S. C., Khatry, S. K. and Ram Shrestha, S. (2007). The impact of a small steady stream of income for women on family health and economic well-being. *Global Public Health* 2(1): 35 – 52.
- KIT, Faida MaLi and IIRR. (2006). *Chain Empowerment: Supporting African Farmers to Develop Markets*. Royal Tropical Institute, Amsterdam, Faida Market Link, Arusha, and International Institute of Rural Reconstruction, Nairobi, Kenya. 31pp.
- Makombe, A. I. M. (2006). *Women entrepreneurship development and empowerment in Tanzania: The case of SIDO/UNIDO supported women micro entrepreneurs in the food processing sector*. Thesis for Award of PhD Degree at University of South Africa, South Africa. 197pp.
- Makombe, I. A. M., Temba, E. I. and Kihombo, A. R. M. (1999). *Credit Schemes and Women's Empowerment for Poverty Alleviation: The Case of Tanga Region, Tanzania*. Report No. 99. Research on Poverty Alleviation, Tanga, Tanzania. 26pp.

- Malhotra, A., Schuler, S. R. and Boender, C. (2002). *Measuring Women Empowerment as a Variable in International Development*. The World Bank, Washington, DC. 12pp.
- Masengi, J. (2005). Determinants of adolescents' sexual behaviour in Dar es Salaam City, Tanzania. Dissertation for Award of Master of Arts Degree at Sokoine University of Agriculture, Morogoro, Tanzania, 129pp.
- Mason, K. O. (2005). *Measuring Women's Empowerment: Learning from Cross-National Research*. In *Measuring Empowerment: Cross-Disciplinary Perspectives*, Ed. by Narayan, D. The World Bank, Washington, DC. 91pp.
- Mayoux, L. (1999). Questioning virtuous spirals: microfinance and women's empowerment in Africa. *Journal of International Development* 11(7): 957 – 984.
- Mayoux, L. (2000). *Micro-Finance and the Empowerment of Women: A review of the key issues*. ILO Social Finance Unit Working Paper No. 23. Rome, Italy. pp. 15 – 20.
- Morris, S. S. (2005). *Epidemiology and the Study of Socio- economic Inequalities in Health*. In: *Measuring health equity in small areas: Findings from demographic surveillance system*. Ashgate Publishing Company, USA. 8pp.
- Mwageni, E., Massanja, H., Juma, Z., Momburi, D., Mkilindi, Y., Mbuya, C., Kasale, H., Reid, G. and Savigny, D. (2005). Socio-economic status and health inequalities in Rural Tanzania: Evidence from Rufiji demographic surveillance system. In: *Measuring Health Equity in Small Areas: Findings from Demographic Surveillance Systems*. INDEPTH Network, Ashgate Publishing House, England. pp. 20 – 32.

- Nathan, R., Armstrong-Schellenberg, J., Massanja, H., Sosthenes, C., Osuna, M. and Mashinda, H. (2005). Child Inequity in Rural Tanzania: Can the National Milenium Development Goals Include the Poorest? In: *Measuring Health Equity in Small Areas: Findings from Demographic Surveillance Systems*. INDEPTH Network, Ashagate Publishing House, England. pp. 33 – 43.
- NBS (2012). *Household Budget Survey 2007*. Ministry of State President's Office Planning and Privatisation, Dar es Salaam, Tanzania. pp. 1-94.
- Oakes, J. M. and Ross, P. H. (2003). The measurement of SES in health research: Current practice and steps towards a new approach. *Social Science Med.* 56: 769 – 784.
- Parvin, G. A., Ahsan, R. S. M. and Chowdhury, M. R. (2005). Women empowerment performance of income generating activities supported by rural women employment creation project (RWECP): A Case Study in Dumuria Thana, Bangladesh. *The Journal of Geo-Environment* 4: 47 – 62.
- Shackleton, S., Paumgarten, F., Kassa, H., Husselman, M. and Zida, M. (2011). Opportunities for enhancing poor women's socioeconomic empowerment in the value chains of three African non-timber forest products (NTFPs). *International Forestry Review* 13(2): 136 – 151.
- Sikira, A. N., Mwageni, E. A. and Kagosi, P. J. (2010). Exploring the link between socio-economic status and gender based violence: Lessons from Serengeti District Tanzania. *Rural Planning Journal* 12(1): 195 – 225.

PAPER FOUR

**Determinants of Women Empowerment in the Onion Value Chain: A Case of
Simanjiro District in Tanzania**

John Jeckoniah (Corresponding author)

Development Studies Institute, Sokoine University of Agriculture

P.O. Box 3024, Morogoro, Tel +255 754 632289. Email: jjeckoniah@yahoo.co.uk

Carolyne Nombo

Development Studies Institute, Sokoine University of Agriculture

P.O. Box 3024, Morogoro, Tel +255 716 923020. Email: cnombo@yahoo.com

Ntengua Mdoe

Department of Agricultural Economics and Agribusiness, Sokoine University of
Agriculture

P.O. Box 3000, Morogoro, and Tel 255 754368168 Email: nmdoe@yahoo.co.uk

Published in the Journal of Economics and Sustainable Development, Volume 3 (10)

2012:89-99

CHAPTER THREE

3.0 CONCLUSIONS AND RECOMENDATIONS

3.1 Conclusions of Major Findings

The following are the summary of the major findings of this study which is the basis for the recommendation made.

3.1.1 Onion Value Chain and Gender Roles and Relations in the Chain

The first specific objective of this study was to analyse the onion value chain and identify gender roles and relations in the chain. The results of the analysis in relation to this objective are presented in the first paper of this thesis. The paper discusses women participation in onion value chain and how changes in gender roles and relations occur in the chain. In general the findings presented in the paper show that women participate in all activities in the onion value chain. However, the majority of women are concentrated in the downstream part of the value chain, especially in production activities. The study also revealed that the extent of women participation in other activities in the onion value chain increases when women acquire or work in their own plots, where they do all the activities involved in onion production as well as engaging in marketing of the onions. Overall, the traditional roles of men and women activities in onion production are becoming blurred; some activities that were traditionally done by men are also done by women, especially when they own their own farm plots. The gradual shift of men into women dominated activities especially those that are paid for e.g. weeding and transplanting may have implication for women income and workload at household level. This study found that, when women acquire their own farm plots apart from household plots, husbands do not extend the needed labour support or participate in some household chores to reduce the work burden for women. Unlike married women, when women who are unmarried,

separated or live as singles acquire ability to own or hire farm plots; their ability to participate both in production and marketing of onions increases, and therefore derive more benefits resulting from their engagement in onion value chain activities.

Furthermore, the findings presented in the first paper show that women participation in decision making over the income accrued from onion production in Simanjiro District was relatively high. Nevertheless, their participation in marketing of onions is still constrained by many factors including lack of capital, traditions that deny woman rights to own assets including land, lack of marketing skills and lack of support from men who dominate selling of the onions. In the onion value chain, women are involved in management of the onion value chain by participating in different nodes of the chain as well as holding different leadership positions in the farmer groups and organisations where men are also involved. However, some posts are especially reserved for women; this is a positive step to involve women in the management of the onion value chain. This effort is anticipated to increase women participation in leadership roles in building their capacity to even compete with men for other posts in farmer organisations, hence political empowerment.

3.1.2 The extent of Women's Empowerment in the Onion Value Chain

The second specific objective of this study was to identify the perception and extent of women empowerment in onion value chain. In this objective the study sought to determine local meaning of women empowerment in onion value chain in order to understand and reflect on commonly used indicators of women empowerment. The findings in relation to this objective show that women perceived empowerment in terms of achievements in different aspects of their life and changes in the relationship with their husbands, partners and other male members of the family. Women's perception of their empowerment covered a wider context ranging from realizing and using their own potential to meet their

needs. It also entailed an increase in income, ability to meet some household expenditure and increased participation in development activities as well as participating in the household decision making. Other important aspects included acquiring a sense of self worth, recognition and respect in the household and in the community such as ability to speak in the group and village meetings and share their ideas with project leaders and local government authorities.

On the other hand, men perceived women empowerment as an increase in awareness and capabilities, which have increased women's confidence in many aspects including the ability to challenge decisions made by men which affect their wellbeing. Women identified men's behaviours and practices in the household as barriers to their empowerment, thus hindering the transformation of the empowerment women obtained in the chain level into the household. Factors mentioned to limit their empowerment were: men's attitude of not allowing women to have full control over resources, interfering with women's decision over the use of money accrued from their activities, restrictions on movement, and their rigidity to accept changes and new ideas suggested by women. Men were also reported to withdraw their contribution to household expenditures when they see women incomes have increased, thus increasing women's burden to meet the household needs.

3.1.3 Gender Differences in Control of Income, Assets and Women Empowerment

The third specific objective of this study was to analyse gender differences in control of income and assets accrued from onion value chains. Income and asset accumulation were used as proxy indicators for socio-economic status. The findings indicate that the proportion and distribution of households possessing a given asset or characteristic revealed a particular pattern. In general the poorest were below average in most of the

items or services to which the better off had access or possessed e.g. motorcycle, mobile phone, television set, mattress and ownership of livestock. The Chi Square (χ^2) statistic indicated a significant relationship ($P < 0.05$) in the distribution of assets between poor and well off for: radio, solar panel, bicycle, television, mattress, land, wooden bed, goat and cattle implying that there was inequality in ownership of these assets between poor and well off individuals despite close gaps in socio-economic status groups. A similar trend was also observed for ownership of house, number of sleeping rooms in the houses and quality of the house and access to essential services such as water and sanitation. Overall, the relationships between socio-economic status and women empowerment were statistically significant ($P < 0.05$), implying that efforts to improve women's wellbeing that focus on income and asset accumulation have the potential to empower women.

3.1.4 Determinants of Women Empowerment in the Onion Value Chain

The fourth specific objective of this study was to analyse the determinants of women empowerment in onion value chain. This objective aimed to measure the extent of women empowerment and analyse factors that determine the transformation of empowerment changes occurring in value chain into women empowerment at household level. According to the findings of the analysis in relation to this objective, women in Simanjiro District were categorized into medium level of empowerment (mean score on CEI = 0.6033). Empowerment was found to increase with education attainment, age at first marriage and women income. Generally, women participating in the value chain development programme were more likely to be empowered than their counterparts who did not participate. Ordinal logistic regression analysis revealed that there was a significant relationship between women empowerment and marital status, education level, age at first marriage, land ownership, access to credit and participation in onion value chain ($P < 0.05$).

3.2 Theoretical Implication of the Findings

The theory of duality of structure explains the dynamic aspect of the empowerment process and contends that people's personal resources and abilities have potential to contribute to their empowerment. It also recognizes the importance of the rules and regulations of the social structure which is socially constructed. This study has found that asset ownership which was used as a proxy indicator for social economic status was associated with women empowerment. Overall, value chain intervention had increased women agency. However, women face several limitations to transform empowerment effects acquired at chain and group levels into household dynamics. As opposed to Giddens' structuration, women agency has not had significant impact on transforming the very structure that gave them capacity to act. The findings of this study agree with most of the literature on agency and empowerment that even when individuals' agency has improved, they may be constrained by the institutional environment in which they operate in such a way that they may not be able to transform their choices into the desired outcomes. The findings of this study offer some empirical explanation of the way community empowerment may contribute or fail to transform to individual empowerment. According to the findings of this study, there is a need for change in community norms that shape behaviour and actions of people in order for women empowerment acquired at chain level to be accepted and valued at individual and household level.

3.3 Recommendations

On the basis of the empirical findings presented in the four papers as presented in this thesis, the following recommendations are made.

3.3.1 Promoting men's involvement in women empowerment activities

The stereotypic perception of men and women towards changes in gender roles and relations are reinforced by norms and customs. These stereotypic perceptions can change through awareness creation on men and women. It is therefore recommended that LGAs and NGOs should ensure men involvement in women empowerment activities so that empowerment changes acquired in chain level are transformed and accepted at household levels.

3.3.2 Strengthening farmers organisations

The producer and marketing groups developed during value chain development are important vehicles towards women empowerment. It is therefore recommended that practitioners and NGOs involved in value chain development should strengthen farmers' organisations to facilitate equitable access by rural producers to agricultural inputs and markets for agricultural inputs. It is also recommended that gender sensitive intervention strategies should be used in forming and strengthening producer and marketing groups to competitively participate in onion value chain and increase women participation and benefits from onion marketing.

Farmer groups have been identified by most respondents as an avenue to link farmers with market and production inputs. However, most of these groups have been formed under the initiatives of the NGOs which their projects are short lived. Therefore, government should increase efforts to strengthen farmers' organisations to have more access to production inputs and agricultural markets.

3.3.3 Improving Women access to Land and other Resources

For successful women empowerment, women should have full access to and control of resources especially land. Although the Tanzania village land act 1999 offers equal opportunities for men and women to own land, women still face discrimination in owning land; therefore, the local government should ensure enforcement of the act so that women also have equal benefits to own land as men. Non-governmental organisations should increase their efforts to advocate for women equal rights in land ownership both under land village act and customary land rights.

3.4 Areas for Future Research

- i. Although this study found that value chain intervention has potential to empower women; men were reluctant in accepting empowerment changes suggested by women. There is need to investigate factors limiting men to accept women empowerment at household level.
- ii. Men were reported as obstacles to women empowerment, but this study did not establish men's attitude towards women empowerment. A study on relationship between changes in men's attitude towards women ownership of resources and acceptance of women empowerment at community and household level is needed.
- iii. This study did not compare the level of empowerment between men and women from the same household as well as other women empowerment domain such as time use for work and leisure versus its impact on women empowerment. Therefore, there is a need to conduct a longitudinal study using women empowerment in agriculture index (WEAI) to compare levels of empowerment between men and women from the same farming households.

APPENDICES

Appendix 1: Questionnaire

Value Chain Development and Women Empowerment in Tanzania: A Case of Onion

Value Chain in Northern Tanzania. A PhD Research Questionnaire for

Jeckoniah, J. N., SUA Morogoro

Section A: Questionnaire Identification

Date of interview

Questionnaire No.....

District Ward.....

Village Hamlet/Sub village

Section B: Background Information /Characteristics of the Respondents

In this section i would like to know your background information; therefore, i will ask question about yourself and your family

No	Age (yrs)	Sex 1. Male 2. Female	Relationship with HH head 1. Houshold head 2. Spouse 3. Brother/Sister 4. Own child 5. In laws 6. Grandsons 7. Helper	Marital Status 1. Single 2. Married 3. Divorced 4. Separated 5. Cohabiting 6. Widow/er 7. Others (specify)	Education Level 1. No formal education 2. Primary 3. Secondary 4. Technical education/Diploma 5. University 6. Others (Specify)	Economic activity 1. Farmer/crop producer 2. Livestock keeper 3. Farming & livestock keeping 4. Pet trader 5. Wage labourer 5. Self employed 6. Formal/civil servant 7. Housewife	Religion 1. Christian 2. Muslims 3. Traditional 4. 5.	Tribe 1. Maasai 2. Pare 3. Chaga 4. 5. 6. 7. 8.
1*								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

**should be the respondent/person interviewed*

- 1. Age at first marriage
- 2. Type of marriage: 1= Monogamy 2= Polygamy 3= others (specify)
- 3. Age of your husband compared to yours:
 - 1. Younger than 2. Same age 3. 1-3 yrs older
 - 4. 4-6 yrs older 5. 7-9 yrs older 6. More than 9 years older
- 4. Income level of spouse: ()
 - 1. Lesser than husband 2. Equal to husband 3. Higher than husband

Section C: Gender roles and Participation in value chain development activities

(Costs and benefits of your participation in onion value chain development activities)

- 5. How many land plots does your household own?
- 6. Land plots owned (acres) Plot1___ Plot2___ Plot3___ Plot4___ Plot5___ Total _____
- 7. Are you allowed to own land apart from household plot? 1= Yes 2= No
- 8. If not allowed to own land what are the factors that restrict/deny women rights to own land in your area?
 - (i).....(ii).....
 - (iii)(iv).....
- 9. Do you have your own cultivable land (apart from household land) which you grow onion? 1= Yes 2= No
- 10. Do you perform different tasks in your own plot than what you usually do in your family plot?
 - 1= Yes 2= No
- 11. What kind of additional/different activities do you usually do on your own plot?
 - (i)(ii).....
 - (iii)(iv).....
- 12. What is the total size of your cultivable land that you grow onion during the last season (acres)_____

13. How did you acquire the piece of land that you cultivate onion?

1= Inherited 2= Purchased 3= Allocated by village government

4=Borrowed 5= Rent

14. What is the total area of land that was under cultivation of other crops during the previous production season (acres)? _____

15. When did you start producing onion for marketing (year)? _____

16. Kindly give the average costs used in the onion production activities during previous production season

SN	Activity per one acres (70m x 70m)	Average cost	Person mostly involved Use codes(1,2,3,4,5,6)					
	Production							
1	Land clearing (removal of vegetation)							
2	Drawing lines, blocks, water ways							
3	Land tillage (inside blocks)							
4	Harrowing and levelling							
5	Drawing farrows							
6	Nursery bed preparation and maintaining							
7	Transplanting							
8	Watering and supervision							
9	Harvesting							
10	Clipping/cutting of leaves							
11	Transporting from field to store/home							
12	Fertilizer application							
13	Watering and Weeding							
	Material Costs							
13	Purchase of seeds							
14	Sprayer/watering can							
15	Herbicides/Pesticides							
16	Fertilizer							
17	Manure							
18	Input transport							
19	Cutting and grading							
20	Maintain store							
21	Grading and storage							
22	Constructing a storage structure							
23	Hiring storage facility							

Key: 1. Men only, 2. Women only 3. Men and women 4. Boys 5. Girls 6. Boys & girls

17. Kindly give details of the labour costs used in onion production during the previous production season

SN	Activity	No of family members worked on the plot in a week	Days worked in a week	Average number of hrs worked in a week	Rate per hour (hired labour)	Rate per hour (family labour)	Total labour cost
1	Land clearing (removal of vegetation and burning)						
2	Drawing lines, blocks, water ways						
3	Land tillage (inside blocks)						
4	Harrowing and leveling						
5	Drawing farrows						
6	Nursery bed preparation and maintaining						
7	Transplanting,						
8	Watering and supervision						
9	Harvesting						
10	Clipping/cutting of leaves						
11	Transporting from field to store/home						
12	Fertilizer application						

18. Sales of onion during the previous season

Product sold	Unit harvest ed(Kg)	No of units sold	Price per unit	Where was the onion sold (use codes below)	When was the onion sold 1.After harvest 2.After storage 3.Befor harvest/at the farm	Total value	Who has final say over use of money obtained 1.Men/husband 2.Woman/wife 3. All/joint decision
Onion							
Onion seeds							

1. At the farm/farm gate price 2. Village market 3. Urban market

19. What are the factors that hinder/restrict women involvement in selling/marketing of onion in your area?

(i)

(ii)

(iii).....

(iv).....

20. Are there any unfavorable policies/local institutional setups, traditions or taboos that hinder your participation in onion production and marketing? (*Explain*)

1= Yes 2= No

.....
.....
.....

21. Do you think other women in your area are benefiting more from onion production and marketing than you?

1= Yes 2= No

22. What are the factors that reduce your benefits from your participation in onion production and marketing?

(i).....

(ii).....

(iii).....

23. On average what amount of cash money you can make decision over its use without consulting your husband first? (Tsh) _____

24. On average what amount of cash money you can not make decision over its use without consulting your husband first? (Tsh) _____

25. What other crops did you harvest and sell during the previous season?

	Crop sold	Unit (Kg)	No of units sold	Price per unit	Where was the crop sold (use codes)	When was the crop sold 1. After harvest 2. After storage	Total value	Who has final say over use of money obtained 1. Men/husband 2. wife 3. All/joint
1	Maize							
2	Sunflower							
3								
4								
5								

1. At the farm/farm gate price 2. Village market 3. Urban market

26. Have you ever received credit from a bank or any other organisation during the last 12 months?

1. Yes 2. No

If 'yes' indicate credit amount received (Tsh) _____

Source of the credit _____

27. Purpose of the credit received (*Tick all responses mentioned, multiple responses acceptable*)

1. Farm development
2. Farm machinery, implements and tools
3. Construction of storage structure
4. Buying food
5. Paying school fees
6. Marriage expenses
7. Others (specify) _____

28. Indicate if you have received the following extension services during the previous productions season

Type of advice	Yes	No	Average number of visits per production season
Technical advisory services e.g. use of improved seeds, use of fertilizer/manure			
Marketing			
Natural Resources Management			
Financial(credit)			
Others (Specify)			

29. Would you say your access to extension services has generally increased, remained the same or decreased during the past 3 years?

1. Increased

2. Remained the same (No change)

3. Decreased

4. Don't know

30. Would you say your access to markets for sale of onion has increased, remained more or less the same or decreased during the past 3 years?

1. Increased

2. Remained the same (No change)

3. Decreased

4. Don't know

31. Would you say onion prices for your products have increased, remained more or less the same or decreased during the past 3 years?

1. Increased

2. Remained the same (No change)

3. Decreased
4. Don't know

Section D: Women Empowerment

In the following section we will discuss over different aspect of empowerment; you are requested to respond by selecting appropriate answer that reflect your experience and practice. The aim of this discussion is to understand your feelings about yourself, the community/society you live in, and the property and assets you own or have access to.

Indirect indicators of individual agency

❖ Informational assets

32. What are the sources of information in this are (*circle/tick all mentioned options*)

1. Radio 2. Television 3. Newspapers 4. Others _____

33. How many times in the last month have you read a newspaper or had one read to you?
(.....)

34. How often do you listen to the radio?

- 1 Every day
- 2 A few times a week
- 3 Once a week
- 4 Less than once a week
- 5 Never

35. How often do you watch television?

- 1 Every day
- 2 A few times a week
- 3 Once a week
- 4 Less than once a week
- 5 Never

36. In the past month, on average, how many times have you made or received a phone call? (.....)

32. In general, compared to three years ago has your access to information about onion market/marketing improved, deteriorated, or stayed about the same?

1 Improved

2 Deteriorated

3 Stayed about the same

4. Don't know

37. Is your household easily accessible by road all year long or only during certain seasons?

1 All year long

2 Only during certain seasons

3 Never easily accessible

4. Don't know

38. In the last three years, do you feel the roads leading to your community have:

1 Improved

2 Worsened

3 Remained the same

4. Don't know

39. How many times have you travelled to *[district headquarter/big weekly or monthly market]* in the past month? (.....)

❖ Organisational assets

40. Are you a member of any organisation or group in this or nearby village?

1 Yes

2 No

41. Which of the following groups are you a member of? (*Tick all mentioned answers;*

Multiple answers acceptable)

- 1 Farmer/producer group
- 2 Livestock keeping/production group
- 3 Marketing groups
- 4 Input receiving groups
- 5 Religious or spiritual group (e.g. church, mosque, temple, informal religious group, religious study group)
- 6 Political group or movement
- 7 Cultural group or association (e.g. arts, music, theatre, film)
- 8 Burial society or festival society
- 9 Finance, credit or savings group e.g. VICOBA
- 10 Water use management group
- 11 Sports group
- 12 Youth group
- 13 NGO or civic group (e.g. Rotary Club, Red Cross)
- 14 Ethnic-based community group
- 15 Other groups [*Please specify*]

42. Which of these organisations/groups are the most important to you? Please specify up to three. Please rank in order of importance

1st 2nd
 3rd

43. How much does being a member of these groups benefit you individually?

1 Greatly

2 Fairly

3 A little

4 Not at all

44. What is the most important benefit, if any, that you feel you gain from being a member of these groups? *[Specify benefit for each group]*

Org/group 1:.....Benefit.....]

Org/group 2.....Benefit.....]

Org/group 3.....Benefit.....]

45. Overall, are the same people members of these three different groups, or is there little overlap in membership?

1 Little overlap

2 Some overlap

3 Much overlap

❖ Material assets

46. Does this house (main house in the compound) belong to you or your household head?

1. Yes 2. No

47. How many rooms are used for sleeping only? (.....)

48. What kind of material has been used for the construction of the wall? **[Observe and tick]**

1. Burnt bricks

2. Corrugated iron sheets/tin

3. Cement bricks

4. Others (specify)_____

49. What kind of material is used for roofing? **[Observe and tick]**

1. Thatch grass/mud 2. Tin 3. Corrugated iron sheets/Asbestos

4. Tiles 5. Others (specify)_____

50. What kind of material has been used for floor? [Observe and tick]

1. Wood planks/Polished wood
2. Ceramic tiles
3. Cement
4. Others (specify)_____

51. What is the main source of energy for cooking do your household use?

1. Firewood
2. Charcoal
3. Gas
4. Kerosene
5. Electricity
6. Others (specify)_____

52. What is the source of water your household uses for drinking?

1. Own piped into household
2. Piped into yard house
3. Public tap
4. Water kiosk
5. Open well/pond/river
6. Others (specify) _____

53. What kind of toilet does your household have?

1. Own flush toilet
2. Shared flush toilet
3. Traditional pit toilet
4. Ventilated improved pit (VIP)
5. Other (specify)_____

54. Does your household own any of the following assets? *[Tick as appropriate]*

SN	Assets	Yes	No	Who has control or final say over its use or sale Use codes
1	Functioning radio			
2	Functioning solar panel			
3	Functioning bicycle			
4	Functioning motor bike			
5	Functioning car/tractor/power tiller			
6	Functioning Telephone/mobile			
7	Functioning Television set (TV)			
8	Functioning sewing machine			
9	Satellite dish			
10	Foam mattress			
11	Water pump			
12	Land			
13	Wooden bed			
14	Goat			
15	Cattle			

1. Husbandry only 2. Wife only 3. Husband and wife

❖ Financial assets

55. Did you feel the need to borrow goods or money in the past year?

1 Yes 2 No

56. Did you actually borrow money or goods in the past year?

1 Yes 2 No

57. Are you in debt to anyone at the moment?

1 Yes 2 No *[Go to question 60]*

58. How indebted would you say you are at the moment?

1 Extremely indebted

2 Very indebted

3 Fairly indebted

4 A little indebted

59. Do you feel you struggle to repay any debts you have?

1 Yes, I struggle greatly

2 Yes, I struggle a little

3 No, I don't struggle at all

❖ Psychological assets

60. Are there any community activities, such as those organized by the local government, religious organisations, the school, the local development association etc, in which you think you are not allowed to participate?

1 Yes 2 No [*Go to question 63*]

61. In which activities do you perceive you are not allowed to participate?

[List up to 3 activities]

1.....2.....3.....

62. Why do you think you are not allowed to participate? [*Tick up to 2 reasons*]

1. Poverty

2. Occupation

3 Lack of education

4. Sex

5. Age

6. Religion

7. Political affiliation

8. Ethnicity or language spoken/ tribe

9. Other [*Specify: _____*]

63. How often have you met with and talked to people from other social groups/tribes outside your home in the last week?

1. Not at all 2. Once 3. Several times 4. Daily 5. Several times a day

64. Are there any people from different social groups that you feel you cannot, or would have difficulty in socializing with?

1. Yes 2. No

65. Why do you feel you cannot socialize with these people? *[List up to 2 reasons]*

- 1. Poverty
- 2. Occupation
- 3. Lack of education
- 4. Gender
- 5. Age
- 6. Religion
- 7. Political affiliation
- 8. Ethnicity or language spoken/tribe
- 9. Other *[Specify and add code: _____]*

66. Is there anything in your life that you would like to change? ***[Probe on changes related to empowerment e.g. wife beating male dominance, wealth inheritance, land ownership]***

1. Yes 2. No

67. What thing(s) would you most like to change? *[List up to 3 areas/things in order of importance]*

1.....2.....3.....

68. Do you think these will ever change?

- 1 Yes 2 No *[Go to question 72]*

69. When do you think they will change?

- 1 Very soon
- 2 Fairly soon
- 3 A long time in the future

70. What are the main difficulties that you feel might prevent these changes from occurring?

[List 1 reason for each area/thing listed in above]

- 1.....
- 2.....
- 3.....

71. Who do you think will contribute most to any change? *[Tick up to 2 reasons]*

- 1 Myself
- 2 My family
- 3 Our group *[Specify type of group]:* _____
- 4 Our community
- 5 The local government
- 6 The national/central government
- 7 Other *[Specify]* _____

72. Do you feel that people like yourself can generally change things in your community if they want to?

- 1 Yes, very easily
- 2 Yes, fairly easily
- 3 Yes, but with a little difficulty
- 4 Yes, but with a great deal of difficulty
- 5 No, not at all

73. What is the one thing you would most like to do in your life?

.....
.....

74. How difficult do you think it will be for you to achieve this?

- 1 Very difficult
- 2 Fairly difficult
- 3 Fairly easy
- 4 Very easy

Direct Indicators of Empowerment

We would like to ask your opinions about the situation of your society, government, and institutions that have an effect on the lives of people.

❖ **Justice**

75. To your knowledge, what mechanisms are used in your area and in other parts of the country to achieve justice? *[List all systems mentioned i.e. formal and informal justice systems]*

- (i).....
- (ii)
- (iii)
- (iv).....

76. Have you ever used these systems to seek redress or access justice?

- 1. Yes
- 2. No *[If none at all, go to question*

77. How many times in the last three years have you used these systems to seek redress or access justice?

.....

78. How happy were you with the outcome?

- 1 Completely happy

- 2 Fairly happy
- 3 Neither happy nor unhappy
- 4 Fairly unhappy
- 5 Completely unhappy

79. How fairly do you think you were treated?

- 1 Completely fairly
- 2 Reasonably fairly
- 3 Not fairly

80. Do you think men get better, equal, or worse treatment in these systems of justice compared to yourself?

- 1 A lot better
- 2 A little better
- 3 Equally
- 4 A little worse
- 5 A lot worse

81. Do you think other groups of people, for instance people from very poor family, different tribe or unmarried women [*different group to respondent*] get better, equal or worse treatment in these systems of justice compared to yourself?

- 1 A lot better
- 2 A little better
- 3 Equally
- 4 A little worse
- 5 A lot worse

82. How active are you in complaining about the systems of justice that you mentioned above?

- 1 Very active

- 2 Fairly active
- 3 A little bit active
- 4 Not active at all

❖ **Market/credit**

83. Did you feel the need to borrow goods or money in the past year?

- 1 Yes, very often
- 2 Yes, fairly often
- 3 Yes, sometimes
- 4 No, not at all

84. Did you actually borrow money or goods in the past year?

- 1 Yes 2 No

85. Which two sources do you most usually borrow from?

- 1 Bank
- 2 Credit associations
- 3 Shopkeepers
- 4 Landlords
- 5 Families
- 6 Other [*Specify* _____]

86. What other sources of credit do you think you have access to, including informal sources?

.....

.....

.....

.....

.....

87. Why do you choose to borrow from this/these source(s)?

- 1 Close location
- 2 Interest rates
- 3 Easy requirements and procedures
- 4 No formal requirements or procedures
- 5 Other [*Specify*]_____]

88. Are there any other sources of credit for people in your area which you feel are not available to you?

1. Yes
2. No

89. Why are these not accessible by you?

- 1 Lack of collateral
- 2 No guarantor
- 3 Interest rates too high
- 4 Culturally unacceptable
- 5 Other [*Specify and add code:* _____]

90. Do you have any savings?

- 1 Yes
- 2 No [*Go to question 92*]

91. How do you decide when the savings will be used and what for?

- 1 I decide on my own
- 2 I decide jointly with my spouse
- 3 My husband decides for me/us
- 4 Another household member decides
- 5 Other [*Specify:* _____]

❖ **Market/labour**

92. How much choice do you feel you have in deciding your involvement in onion production?

1 Complete choice

2 Some choice

3 No choice

93. How easy would it be to change your current productive activities/occupation if you wanted to?

1 Very easy

2 Fairly easy

3 Not very easy

4 Impossible to change

94. Why would it be easy/not easy to change your productive activities/occupation?

1 Lack skills

2 No local alternatives

3 Traditional barriers/ against custom and culture

4 Other [*Specify and add code:* _____]

❖ **Market/ goods**

95. Have you ever felt threatened with eviction from this land/property?

1 Yes, very often

2 Yes, fairly often

3 Yes, occasionally

4 No, never

96. How strongly do you feel the authorities would protect you if somebody tried to make you leave your property/land?

1 Very strongly

2 Fairly strongly

3 Not at all

97. Are there any restrictions on what you are able to own or rent?

1 Yes

2 No

98. Why do you think there are restrictions on what you can own or rent?

1 Your sex

2 Your tribe

3 Your age

4 Your religion

7 Other [*Specify and add code:* _____]

99. Have you ever personally inherited any land/property or other items?

1 Yes

2 No

100. Have your brothers or sisters ever inherited any land/property or other items?

1 Yes, brothers

2 Yes sisters

3 Yes, brothers and sisters

4 No

101. Who is traditionally allowed to inherit land/property or other assets?

1 All family members

2 Male family members only

3 Female family members only

4 Other [*Specify:* _____]

❖ **Society/household & kinship groups**

102. When decisions are made regarding the following aspects of household life, who is it that normally takes the decision? **[Use codes below]**

1. Household expenditure ()

2. Education and health ()

3. Political decisions ()

4. Marriage choices ()

5. Religious beliefs ()

1. *Male head of household*

2. *Adult male household members*

3. *Female head of household*

4. *Adult female household members*

5. *Male and female heads of households*

6. *All adult members of household*

7. *All members of household, including children*

8. *Other [Specify and add code: _____]*

103. To what degree do you feel you can make your own personal decisions regarding these issues if you want to? **[Use codes below i.e. 1, 2, 3, and 4.]**

1. Household expenditure

2. Education and health ()

3. Political decisions ()

4. Marriage choices ()

5. Religious beliefs ()

1 *To a very high degree*

2 *To a fairly high degree*

3 *To a small degree*

4 *Not at all*

104. To what degree do you feel you have control over decisions regarding your own personal welfare, health and body?

1 To a very high degree

2 To a fairly high degree

3 To a small degree

4 Not at all

105. How easy do you find it to access health services when you need to?

1 Very easy

2 Fairly easy

3 Fairly difficult

4 Very difficult 5 Impossible

106. How easy do you find it to access education or training services when you need to?

1 Very easy

2 Fairly easy

3 Fairly difficult

4 Very difficult

5 Impossible

107. Looking back over the past years (before you involved your self into onion cultivation), do you feel more or less has been spent on your personal health care compared to other household members?

1 Much more

2 A little more

3 About the same

4 A little less

5 Much less

6 Not sure

Construction of Empowerment index

In this sub section we will discuss the extent of your freedom and participation in different issues of importance in your life. Kindly respond to this question honestly reflecting your true experience and practise.

108. Personal Autonomy Index

SN	Can you do the following without seeking permission from your husband?	1	2	3
1	Visit your parental home			
2	Visit a hospital or clinic			
3	Visit the village market			
4	Help a relative with money			
5	Set money aside for your personal use			
6	Seeking help e.g. financial			

Key: Never =1, Occasionally =2, Generally =3

109. What are the factors that hinder/restrict your personal autonomy?

- i.
- ii.
- iii.
- iv.
- v.
- vi.

110. Index of Household Decision Making (HDMI)

SN	Who makes decision on the following issues in your household?	<i>[use codes below the table]</i>		
		1	2	3
1	Children's education in school			
2	Family planning			
3	Family day-to-day expenditures			
4	Purchase of major or permanent items e.g. land, bicycles, inputs farming			
5	Going outside of home e.g. visiting parents and other relatives who live away or in nearby villages			
6	Medical treatment			
7	Spending personal income e.g. send money to parents and relatives			
8	Use of family income e.g. from sale of onion			
9	Whom to marry your daughter/son			
10	Selection of crops to plant in the field			
11	Purchasing of food for the family			
12	Purchasing clothes for yourself and children			
13	Entertaining guests			

Key: Husband Alone =1 Joint Decision =2 Wife Alone =3

111. What are the factors that hinder/restrict your participation in household decision making?

- i.
- ii.
- iii.
- iv.
- v.

112. Index of women economic contribution to household (ECHH)

SN	Variables/Statement	Participate/ contribute	
		Yes	No
1	Do you, in your own name, own any land that you use for onion production?		
2	Own any productive assets (for example: cattle, sewing machine) that contribute to household income?		
3	Have you accumulated any cash or savings from onion production on your own plot?		
4	Have you ever used your savings from sale of onion for business or money lending?		
5	Do you use the money obtained from sale of onion to meet household expenses		
6	Do you have a separate plot for Production of food/cash crops		
7	Do you do any other economic activity (apart from crop and livestock) e.g. curving, small business that earns you some money for use in household		
8	Do you involve yourself in wage labour activities which contributes to household income		
9	Do you get money from selling your own livestock (apart from those owned by husband)that contributes household expenditure		

113. Economic Domestic Consultation Index (EDC)

SN	Does your husband consult you when :	1	2	3
1	Buying furniture and utensils			
2	Purchasing land for home or business			
3	Spending for the education of children			
4	Purchasing medical treatment for the family			
5	Purchasing respondent's clothes			
6	Purchasing children's clothes			
7	Purchasing daily food			
8	Spending money accrued from sale of onion			
9	Opening up a bank account			
10	Purchase of Furniture /Consumer durables			
11	Use of personal salary			

Key: 1= Never, 2= Occasionally, 3= Generally

114. Index of freedom of movement (FM)

SN	Can you do the following without seeking permission from your husband?	Degree of mobility				
		1	2	3	4	5
1	Visiting the markets (to sell or purchase consumables) local or weekly or nearby village [e.g. mnada]					
2	Visiting medical facility e.g. hospital/clinic/doctor					
3	Visiting your relative / friend's house					
4	Visiting your relative parental home					
5	Attend meetings/ workshop/group meeting					
6	Participation in social functions local e.g. marriage/wedding ceremonies					
7	Purchasing inputs from distant shop					
8	Participation and organisation of cultural programmes					
9	Visiting financial institutions e.g. VICOBA for loan application or paying instalments					

Key: Never=1, Occasionally=2, Frequently=3, Accompanied=4, Ever gone alone=5

115. What are the factors that hinder/restrict your freedom of movement?

- i.
- ii.
- iii.
- iv.
- v.

116. Political Autonomy Index

SN		1	2	3
	Can you do the following without seeking permission from your husband?			
1	Vote in your own mind/decision			
2	Participate in public issue e.g. village meeting			
3	Standing for election			
4	Usually aware of important current political issue (e.g. constitution review, bunge session etc)			
5	Participate in public protest or political meeting			
6	Campaign politically for candidate or political party			

Key: Never =1, Occasionally = 2, Generally =3

In the following section i would like to understand your perception and awareness on some issues with regard to freedom from family domination that you experience.

117. Women perception on gender awareness and Freedom from Family domination

SN	Statement/issue	1	2	3	4	5
1	Men are justified to have final say over use of money in the household					
2	Husband/other family member are justified to prevent women/wives from visiting their parents or friends					
3	Women should not be involved in politics, because men can vote for them					
4	Men are justified to beat their wives if they disobey them					
5	Men/husband should receive the best share of the meal and should be saved first					
6	Men only should inherit property rights in the household					
7	Women have the right to decide on their reproductive choice					
8	Women have the right to decide whether and when to engage in marriage					
9	Women have the right to decide over their divorce rights					
10	Women should be given equal chance to participate in economic opportunities e.g. involvement in onion production and sales					
11	Girls and boys should be given equal chances to get better education					
12	Women have the right to work outside the home and earn personal income					

Key 1=strongly agree 2=agree 3=undecided 4=disagree5= strongly disagree

118 What factors affect your active participation in onion Value Chains?

- i.
- ii.
- iii.
- iv.
- v.
- vi.
- vii.
- viii.
- ix.
- x.

Thank you very much for your time and information that you gave us

Appendix 2: Focus Group Discussion Guide

1. How is women empowerment defined in your area?
2. What are men and women roles in onion value chain activities? Has these roles changed overtime? What has changed and why? (horizontal and vertical linkages)
3. What factors/issues/behavior denotes improvement in women empowerment in your area (e.g. in decision making, increase in income, access to and control of income and resources)
4. What are the factors that promote women empowerment in your area?
5. What are the factors that hinder women empowerment from occurring in your area?
6. What is the attitude of men towards women empowerment? Is there any change in the attitude of the men and community leaders regarding women's empowerment?
7. Who usually have a final say over use of money accrued from sale of onion? Why? Has anything changed during the recent past (e.g. five years)?
8. Does women participation in onion production and marketing increase the woman's influence over economic resources and participation in economic decision making at household and community level?
9. Does participation in onion production and marketing groups influence the individual development and growth of a woman?
10. Does participation in onion production and marketing groups increase woman's mobility, development of networks and interactions with other members of your group and community?
11. Does participation in onion production and marketing groups increases woman's participation and influence in social, community and political activities?
12. What are the assets that are owned in your household that denote wealth/improved living conditions?
13. Has involvement in onion production and marketing helped you to achieve important/ desired life outcomes? What have you achieved?
14. Doe participation in onion production and marketing improve livelihood? What aspects of women livelihood have changed in the recent past?

Appendix 3: Key informants Interview Guide

1. What are the main economic activities that many people derive their livelihood from?
2. Are there any NGOS/CBOS/Government projects promoting women empowerment in your district/region?
3. Do women and other disadvantaged groups have equal opportunity in participating into activities that promote/result into women empowerment?
4. What are the factors promoting/hindering women empowerment in your area?
5. Does women involvement in onion value chain development contribute to women empowerment?
6. Do women and other disadvantaged groups in your area allowed to own land?
7. Is there any difference in terms of participation to development activities between women involved in onion value chain and those not involved? How?

Appendix 4: Checklist for value chain analysis (profitability analysis)

❖ Producer

	Description	Unit	Unit TShs)	Total (TShs)	MIN	MAX
A	Land Preparation Cost (70x70 m2)					
	1. Land Rent					
	2. Labourers					
	a. Stalk Clearing					
	b. Harrow and Plough					
	c. Directing water to the plot					
	d. Drawing lines, blocks, water ways					
	e. Hoe - leveling and clearing					
	f. Drawing furrows, transplanting, watering and supervision					
	Total A					
	% of total Cost					
B	Production Means					
	1. Seeds					
	2. Manure					
	3. Urea fertilizer					
	4. Nursery (7 x 10 m2)					
	5. Watering the nursery					
	6.					
	7.					
	8.					
	Total B					
	% of total Cost					
C	Transplanting and Maintenance					
	1. Preparing seeding for transplanting					
	2. Fertilizing					
	3. Transplanting					
	4. Weed Clearing I					
	5. Irrigation - controlling water flow					
	6. Controlling destructive birds					
	7.					
	8.					
	Total C					
	% of total Cost					

D	Harvest and Post Harvest						
	1. Harvesting and hulling						
	2. Drying and winnowing						
	3. Transport from farm to warehouse						
	4. Storage costs						
	5.						
	6.						
	Total D						
	% of total Cost						
	Total Cost (A+B+C+D)						
E	Income from farming						
	1. Paddy Sales (Low price season)						
	2. Paddy Sales (high price season)						
F	Gross Profit (low price)						
	SGM						
	Gross Profit (high price)						
	SGM						

❖ **Traders**

No	Description	Unit	Unit/kg (TShs)	Minimum (TShs)	Average (TShs)	Maximum (TShs)
A	Processing Cost	1 bag = 100kg				
	Purchase Onion					
1	from whole sellers					
2	Sorting and grading					
4	Packaging					
5	Marketing - telephone calls					
6	Market cess					
	Total Cost					
B	Sale price of rice					
C	Gross Profit					
D	Simplified gross margin					