Economic Activity Diversification and Livelihood Outcomes in Smallholder Agriculture in Thika, Kenya

JOSEPH FRANKLIN NTALE

Thesis Submitted in Fulfillment of the Requirements for the Award of the Doctor of Philosophy Degree in Business Administration, School of Business,

University of Nairobi

Joseph Ntale

Economic Activity Diversification and Livelihood Outcomes in Smallholder Agriculture in Thika, Kenya

Shaker Verlag Aachen 2013

Bibliographic information published by the Deutsche Nationalbibliothek The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at http://dnb.d-nb.de.

Zugl.: University of Nairobi, Diss., 2012

Copyright Shaker Verlag 2013 All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publishers.

Printed in Germany.

ISBN 978-3-8440-1944-5

Shaker Verlag GmbH • P.O. BOX 101818 • D-52018 Aachen

Phone: 0049/2407/9596-0 • Telefax: 0049/2407/9596-9

Internet: www.shaker.de • e-mail: info@shaker.de

DECLARATION

This thesis is my original work and has not been submitted for the award of a degree in any other university

Joseph F. Ntale

D/80/P/8105/2000

This thesis was supervised by:

Prof. Martin Ogutu

School of Business

University of Nairobi

Prof. Germano Mwabu

School of Economics

University of Nairobi

Dr. Kate Litondo

School of Business

University of Nairobi

ACKNOWLEDGEMENT

I sincerely want to register my special appreciation to Prof. Martin Ogutu, Prof. Germano Mwabu, and Dr. Kate Litondo for the supervision of this thesis. I wish to acknowledge my PhD course work instructors, namely; Prof. G. P. Pokhariyal, Prof. Rosemary Atieno, Prof. Nixon Muganda, Prof. Peter K'obonyo, Prof. Francis Kibera, Prof. Isaac Mbeche, Prof. Dorothy McCormick, Prof. Henry Bwisa, and Prof. D. Kulundu.

I sincerely appreciate the logistical support of Mr. Vincent Mwinjiro, Sr. Patricia Lanigan and District Agricultural Officers of larger Thika district who were my research assistants and informants, namely, Murote Charles, Karimi Rahab, Esther Nyambura, Gitau Mary, Njau Alex, Kihara Philis, Mwangi Pricilla, Karanja Peter, Kiseve Stephen, Solomon Ndaiga, Nyoike Patrick and Mr. John Musina.

I would like to acknowledge the help of The Catholic University of Eastern Africa, The University of Nairobi and Maharishi University of Management, Iowa, Fairfield, USA for their financial support. I acknowledge the moral and financial support of Mr. Musyoki Dan, Mr. Oscar Mapopa, Ms. Elizabeth Ann Huesing, Mr. David Lutaaya, Dr. Chris Gakuu, Rev. Prof. John C. Maviiri, Fr. Pius Kitanywa and Ms. Otai Jane.

I sincerely like to thank my family members, namely, Moses Kizito Ntale, Elizabeth Zalwango Ntale, Isaac Karanja Ntale, Modester Njagi family, and James Murunga Family for their moral support and prayers. Special appreciations go to my parents, Mr. Joseph Serwadda and Mrs. Imelda Nabukalu for their unwavering love and prayers.

The wisdom of His Holiness Maharishi Mahesh Yogi; enshrined in his saying 'Nature is the best organizer' is my source of inspiration. Above all I thank the almighty God for having brought me this far, and with grace.

DEDICATION

This thesis is dedicated to Tebyasa family of The Lion clan of the Buganda Kingdom.

TABLE OF CONTENTS

DECLARATION	i
ACKNOWLEDGEMENT	ii
DEDICATION	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
ACRONYMS	ix
DEFINITIONS OF KEY TERMS	X
ABSTRACT	X
CHAPTER ONE: INTRODUCTION	1
1.1 Background	1
1.1.1 Economic Activity Diversification	1
1.1.2 Livelihood Outcomes	2
1.1.3 Agro-Entrepreneurship Initiatives	4
1.1.4 Small-Scale Farming	5
1.1.5 Smallholder Agriculture in Thika	7
1.1.6 Cross Cutting Issues in Livelihood Diversification	8
1.2 Research Problem	10
1.3 Research Objectives	12
1.4 Justification of Study	12
1.5 Structure of the Thesis	13
CHAPTER TWO: LITERATURE REVIEW	14
2.1 Introduction	14
2.2 Theoretical Foundations of Entrepreneurship	14
2.2.1 Economic Perspective	15
2.2.2 Psychological and Personality Perspectives	16
2.2.3 Sociological and Cultural Perspectives	18
2.2.4 Integrative Perspective	20
2.3 Livelihoods of Small Scale Farmers	24
2.4 Diversification among Small Scale Farmers	27
2.5 Small-scale Farming in Thika	30

2.6 Small-scale Farming and Entrepreneurship	32
2.7 Critical Review of Empirical Studies on Diversification	34
2.8 Summary of Empirical Studies	36
2.9 Conceptual Framework	39
2.10 Research Hypotheses	40
CHAPTER THREE: RESEARCH METHODOLOGY	41
3.1 Introduction	41
3.2 Research Philosophy	41
3.3 Research Design	41
3.4 Population of the Study	42
3.5 Sampling and Sample Sizes	42
3.6 Data Collection Instruments	44
3.7 Empirical Framework and Data Analysis	45
3.7.1. Measurement of Variables	47
3.7.2 Achieving the Study Objectives	49
CHAPTER FOUR: DESCRIPTION OF THE STUDY AREA	51
4.1 Introduction	51
4.2 General Perceptions of the Study Site	51
4.2.1 Thika East District	52
4.2.2 Thika West District	53
4.2.3 Ruiru District	54
4.2.4 Gatanga District	56
4.3 Sample Statistics	58
4.3.1 Farm Features	58
4.3.2 Farmer Characteristics	59
4.3.3 Financial Services	62
4.3.4 Economic Activity Diversification.	63
4.3.5 Motivations for Diversification	66
4.3.6 Livelihood Outcomes	68
4.3.7 Correlation of Vertical Diversification with Selected Variables	70
4.3.8 Correlation of Portfolio Diversification with Selected Variables	72
4.3.9 Correlations of Structural Diversification with Selected Variables	75

CHAPTER FIVE: ESTIMATION RESULTS AND DISCUSSION	77
5.1 Introduction	77
5.2 Determinants of Entrepreneurship	77
5.2.1 Determinants of Vertical Diversification	78
5.2.2 Determinants of Structural Diversification	81
5.2.3 Determinants of Portfolio Diversification	83
5.3 Impact of Diversification on Livelihood Outcomes	86
5.3.1 Diversification and Physical Assets	88
5.3.2 Diversification and Social Capital	93
5.3.3 Diversification and Human Capital	97
5.3.4 Diversification and Income	100
5.3.5 Diversification and Employment	103
5.4 Summary of the Results	105
CHAPTER SIX: SUMMARY, CONCLUSIONS AND RECOMENDATIONS	106
6.1 Introduction	106
6.2 Summary of the Findings	106
6.3 Entrepreneurship Implications of the Findings	108
6.4 Conclusion.	111
6.5 Recommendations	112
6.5.1 Policy	112
6.5.2 Management Practice	114
6.6 Limitations of the Study	115
6.7 Suggestion for Further Research	116
REFERENCES	117
APPENDICES	127
Appendix I: Questionnaire	127
Appendix II: Additional Results	131
Appendix III: Administrative Structure of Thika District	137
Appendix IV: Larger Thika District Fact Sheet	139
Appendix V: Map of the Study Area	149
Appendix VI: Study Area Population Density	150

LIST OF TABLES

Table 2.1: Cultural Dimensions of Entrepreneurship	18
Table 2.2 Multi-Dimensional Entrepreneurship Model	33
Table 2.3 Summary of Empirical Studies	36
Table 4.1 Measurement of Variables	47
Table 4.1: Descriptive Statistics	59
Table 4.2 Correlations of Vertical Diversification with Selected Variables	71
Table 4.3 Correlations of Portfolio Diversification with Selected Variables	74
Table 4.4 Correlations of Structural Diversification with Selected Variables	76
Table 5.1: Determinants of Vertical Diversification	80
Table 5.2: Determinants of Structural Diversification	82
Table 5.3: Determinants of Portfolio Diversification	85
Table 5.4a: Endogenous Diversification and Physical Assets, ML Estimates	89
Table 5.4b Exogenous Diversification and Physical Assets, ML Estimates	90
Table 5.5a: Endogenous Diversification and Social Capital, ML Estimates	95
Table 5.5b: Exogenous Diversification and Social Capital, ML Estimates	96
Table 5.6a: Endogenous Diversification and Human Capital, ML Estimates	98
Table 5.6b: Exogenous Diversification and Human Capital, ML Estimates	99
Table 5.7: The Effect of Diversification on income, OLS and 2SLS Estimates	102
Table 5.8: Effect of Diversification on Employment, OLS and 2SLS Estimates	104

LIST OF FIGURES

Figure 2.1 Influence of Economic Activity Diversification on Livelihood outcomes	39
Figure 3.1 Framework for Empirical Analysis	45

ACRONYMS

2SLS - Two Stage Least Squares

ALRMP - Arid Lands Resource Management Project

ASALs - Arid and Semi-Arid Lands

CDF - Constituency Development Fund

CEC - Commission of the European CommunitiesDFID - Department for International Development

DIDC - District Information and Documentation Centre

EPHTFCP - Eastern Province Horticulture and Traditional Food Crops Project

EPZ - Export Processing Zone

FAO - Food and Agriculture Organization

GDP - Gross Domestic Product

GEM - Global Entrepreneurship Monitor

GoK - Government of Kenya

HIV/AIDs - Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome

ICT - Information and Communication TechnologiesKAPP - Kenya Agricultural Productivity Programme

KENFAP - Kenya National Federation of agricultural Producers

KEPOFA - Kenya Poultry Farmers Association

KFSSG - The Kenya food security steering group

KPCU - Kenya Plantations and Planters Co-operative Union

KTDA - Kenya Tea Development Authority

LPM - Linear Probability Model

MDGs - Millennium Development GoalsMLE - Maximum Likelihood Estimate

MMS - McGrath, McMillan and Scheinberg

MSME - Micro, Small and Medium Enterprises Competitiveness
 OECD - Organization for Economic Corporation and Development

OLS - Ordinary Least Squares

SACCOs - Savings and Credit Cooperatives
 SLA - Sustainable Livelihood Approach
 SMEs - Small and Medium Enterprises

USAID - United States Agency for International Development

VCT - Voluntary Counseling and Testing

WDF - Women Development Fund

YEF - Youth Enterprise Fund

DEFINITIONS OF KEY TERMS

Agro-entrepreneurship - The process of an economic undertaking to improve the quantity and/or quality of agricultural produce through creativity and innovation. Economic Activity Diversification - The entrepreneurial activity of farmers participating in a variety of commercial and non-commercial activities over and above their core business of agricultural primary production. Entrepreneurial Behaviour - Undertaking of a novel economic activity that leads to better livelihoods. Entrepreneurship - The creative and innovative process of coming up with new products, new modes of doing business and new technology to displace the old ways of doing things for better livelihoods. Livelihood - A means of earning a living through capabilities, activities and social and material resources. Livelihood Outcome - A life improving item or a condition of life resulting from a certain economic activity. An achievement of livelihood strategies of farmers such as more income, improved standard of living, reduced vulnerability and improved food security. Portfolio Diversification - Farmers' participation in non-agricultural business activities Small-Scale Farmer - An individual involved in smallholder agriculture with less than 10 acres of land holding. Structural Diversification - Mixed farming characterized by a variety of crops and/ or livestock (including fish). Vertical Diversification - Value addition to the primary agricultural products by

processing, branding or packaging.

ABSTRACT

This study investigates the determinants of entrepreneurship and its effects on livelihood outcomes. Economic activity diversification, resulting from risk-taking, alertness to profit opportunities, innovation and creativity, are viewed as entrepreneurial behaviours, with potential to improve livelihoods. In this study activity diversification encompasses vertical, portfolio and structural aspects of a livelihood, while the associated livelihood outcomes consist of physical assets, social capital, human capital and labour market achievements. There is an apparent lack of consensus among researchers on the determinants and the contribution of economic activity diversification on livelihood outcomes among farmers. The aim of the study is to analyze entrepreneurship and how it affects livelihood outcomes among small-scale farmers.

A cross-sectional survey research design was employed and a multistage sampling technique was used to identify 15 locations of Thika area from which 388 homesteads were picked using line transect sampling technique. Descriptive statistics were used to measure the extent of entrepreneurship among farmers. Linear Probability Model (LPM), Probit and Logit models were used to estimate the results of the study. The results show that only 6% of the small-scale farmers add value to their agricultural produce; 38% participate in non-agricultural businesses, and 88% practiced mixed farming. The determinants of vertical diversification are distance to the market and access to loan facilities. The determinants of structural diversification include farm size, electricity, running water and gender. The factors influencing portfolio diversification are running water, the size of the farm, distance to the market, gender, education level, cost of farming, existence of business opportunities and desire for social status.

The study shows that portfolio diversification has a strong positive effect on labour income, and vertical diversification is associated with significant employment creation. Further, structural diversification is shown to enhance survival chances through human capital formation. The study recommends that a policy be put in place to encourage financial institutions to advance credit to farmers in order to facilitate value addition to farm produce; partitioning of farm land should be discouraged to enable farmers act commercially and

entrepreneurship training should be intensified in order to sharpen the ability of farmers in identifying business opportunities in the environment. Further investigation is needed to establish the effect of livelihood outcomes on economic activity diversification and the extent of risk averse among the small-scale farmers.