FAKULTÄT II: INFORMATIK, WIRTSCHAFTS UND RECHTSWISSENSCHAFTEN

Social Capital and Market Participation of Smallholder Organic Farmers in Tanzania

Thesis

Submitted in Fulfillment of the Requirement of the Title of **Doktor der Wirtschaftswissenschaften (Dr. rel. pol.)** of Carl von Ossietzky Universität Oldenburg, Germany

Submitted by

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January 2024

Oldenburg, Germany

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DECLARATION

I, Rosemary Deogratias Mubezi, hereby declare that this thesis titled **"Social Capital and Market Participation of Smallholder Organic Farmers in Tanzania"** submitted to the Faculty of Computing Sciences, Business Administration, Economics and Law of Carl von Ossietzky University of Oldenburg, as a requirement for the award of Doctor of Philosophy (PhD), is my own original work and has not been submitted by me for any academic award at this or any other tertiary institution before. All sources cited or quoted in this thesis are indicated and acknowledged with a comprehensive list of references.

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Hiermit erkläre ich an Eides statt, daß ich die vorgelegte Dissertation mit dem Titel "Social Capital and Market Participation of Smallholder Organic Farmers in Tanzania" selbständig verfaßt, keine anderen als die von mir angegebenen Quellen und Hilfsmittel benutzt und die den benutztenWerken wörtlich oder inhaltlich entnommenen Stellenkenntlich gemacht habe.

Oldenburg, den 10 Januar 2024 Rosemary Deogratias Mubezi

ACKNOWLEDGEMENT

My deepest gratitude is extended to the Almighty God for the unconditional love, care, good health, strength and guiding me throughout my PhD undertaking. May His name be glorified. This piece of work has been accomplished through love, support, guidance, and involvement of many people who I am thus indebted to convey my gratitude. Though everyone's contribution is highly valued and honored, only a few are mentioned to represent all.

My utmost gratitude goes to my supervisor Prof. Dr. Bernd Siebenhüner, the Chair of the Ecological Economics Section, the Department of Business Administration, Economics and Law of Carl von Ossietzky University of Oldenburg. His patience and commitment in guiding, coaching and mentoring me and ensuring a conducive learning environment throughout my entire study period is highly appreciated. I also express my deepest appreciation to my second supervisor, Prof. Raymond Auerbach of the Nelson Mandela University for cordially accepting responsibility as supervisor and mentor. His valuable insights and constructive inputs have significantly contributed to the success of this work.

I could not have undertaken this journey without financing. I express my sincere gratitude to Prof. Dr. Bernd Siebenhüner, Prof. Dr. Carsten Speck and Dr. Malve von Mollendorf for mobilizing my financial support through various projects like (ADAPT-LOCK-IN), CERMESA, and DIGI-FACE. I appreciate this support as it was one of the motivations to carry on with the endeavor. My gratitude goes to Ms. Birgit Schelenz for handling all logistics and administrative supports during the entire period of my study.

I direct special thanks to the Open University of Tanzania for granting me permission and study leave to undertake my Doctoral studies in Germany and for granting me with research permits for fieldwork. I am grateful to Prof. Joseph Magali, Dr. France Shayo, Dr. Proches Ngatuni and Dr. Hawa Uisso for the advice, encouragement and administrative guidance. My sincere gratitude is also extended to my best friend Dr. Sophia Mbura for her valuable, continuous encouragement and support throughout this journey.

I further extend my thanks to the Kilimanjaro and Morogoro Regional and District Authorities for the permission to conduct my research in their areas of jurisdiction. My appreciations to Mr. Daniel Ndewasinde Lema, the Siha District Agriculture, Extension, Irrigation and Cooperatives Officer (DAEICO), to Ms. Judith William, the Siha District Agricultural Extension Officer and to Ms. Joan Godson Mlawa, the Siha District Horticultural Officer. They assisted me in organizing

and coordinating meetings with smallholders and correspondents in organic farming schemes. I also thank the management at Africado and Natural Extracts Industries (NEI) for providing me with a friendly environment for data collection. I thank the Morogoro Urban District Agricultural, Cooperatives and Irrigation Officer and the management at Sustainable Agriculture Tanzania (SAT) for permitting me to undertake field research in the areas. Thanks to Mr. Yohana Haule at SAT for logistics and organizing meetings with smallholder organic farmer groups. I extend my sincere gratitude to Mr. Phillipo Lugangila, my research assistant from SAT, who despite the unfavorable weather and rough roads, never hesitated to continue with the task to its completion. His commitment to assist me in fieldwork to its completion is highly appreciated. My appreciation are extended to all smallholder organic farmer groups in the selected cases. Their views and opinions through focus group discussions have made significant contributions towards making this piece of work achievable. I am also thankful to the Tanzania Organic Agriculture Movement (TOAM) officials for their insights.

Special thanks are extended to the family of Mr. and Mrs. Klaus Scholl for willingly and selflessly becoming part of my family. Their devotion in providing social support to my family as I undertook my studies will be honored forever. I recognize the Medical Doctors and Nurses at the Evangelisches Krankenhaus in Oldenburg who took good care of me for the entire period I was hospitalized. Special thanks to Dr. Jandali for handling regular checkups during and after the operations. I am grateful to my fellow PhD students with whom we constructively criticized and encouraged one another during colloquium presentations. My appreciation to the Catholic Community at St. Marien Church, friends and well-wishers who took part in helping and encouraging me. My sincere gratitude to my parents, siblings, relatives and friends who always prayed for and encouraged me whenever the road seemed difficult to cross.

My deepest heartfelt gratitude goes to my family, my greatest motivation towards making this endeavor a success. I am indebted to my ever-loving husband Dr. Musa Nkuba Shelembi and our beloved children Mary-Immaculate, Ingbert, Mary-Inviollate and Mary-Iouvette. With its ups and downs, we took this journey together from the beginning to the very end. Your love, encouragement and patience in all situations motivated and gave me strength to carry on.

I thank everyone who will take time to read this work and find it informative and that it adds value to the existing body of knowledge. Thank you.

Rosemary.

ABSTRACT

Sustainable agriculture is one the key undertakings that contribute to the attainment of the Sustainable Development Goals of the United Nations. However, agriculture has for long time not been a mechanism that is used in alleviating poverty to the larger populations of smallholder farmers in rural communities of the developing economies. Some of the smallholder farmers are the main actors in sustainable farming practices such as those engaging in organic agriculture. Beyond the endowments of natural resources like arable and fertile lands, water sources and human capital, smallholder farmers in developing economies are also embedded with social capital resources and connectedness. Harnessing the combination of such resources may help to unlock the potentials by increasing incomes, improving well-being and livelihoods and ultimately pulling smallholders out of poverty.

Despite their social capital endowments, there is scant literature evidence that shows how smallholder farmers utilize the social capital aspects of cooperation and networks embedded in them to enhance market participation. This study filled this gap by investigating on the role of social capital on the market participation of smallholder organic farmers in Tanzania. Specifically, the study searched on the types of smallholder organic farming schemes that are found in two regions of Kilimanjaro and Morogoro as study areas. It then examined how the internal cooperation and social networks influence market participation of smallholder farmers in selected organic farming schemes in the study area. The study further streamlined the policy implications to support internal cooperation and social networks for enhancing market participation of smallholder organic farmers. The study was guided by the Social Capital Theory (SCT) and the Sustainable Livelihoods Framework (SLF).

A multiple case study research design was adopted in which three cases of purposively selected smallholder organic farming schemes were used. These are the Organic Vanilla Farming Scheme, the Africado Organic Farming Scheme and the Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme. A qualitative approach for data inquiry and analysis was used. Through the approach, in-depth interviews with key informants from the schemes and government officers were conducted. Focus Group Discussions (FGDs) were also undertaken in thirteen groups of smallholder organic farmers in the schemes. These techniques captured an in-depth understanding on how groups collectively deploy social capital attributes in fostering participation

in markets for their organic products. Thematic Analysis (TA) method was used to analyze the gathered data and the analysis was aided by MAXQDA, a software for qualitative data analysis.

The Organic Vanilla Farming Scheme and Africado Organic Farming Scheme were found to operate on business models that include organized smallholder farmers and respective agribusinesses. The SAT Organic Farming Scheme was found to operate on agribusiness enabling partnerships between the SAT initiative and independent groups of smallholder organic farmers. Reflecting on internal cooperation, the study found smallholder organic farmers' market participation to be highly influenced by the formal governance mechanism established in groups. Market participation was also highly but negatively influenced by the business negotiation conditions that exist in the schemes. Moreover, market participation was found to be moderately influenced by internal quality management mechanisms established by smallholder organic farmers. Furthermore, participation was found to be slightly influenced by external quality management mechanisms and gender concerns in groups. Regarding social networks and market participation, smallholders' market participation was found to be highly influenced by the training and capacity-building networks, market access, marketing and selling networks; and quality management and sustainable farming networks in the schemes. Smallholders' market participation was found to be moderately influenced by farm inputs, farm facilities and service access networks; quantity facilitation and farmer groups networks in the schemes.

The study urges policy makers to empower the institutionalization of smallholder organic farmer groups and their capacity to negotiate in business. Facilitation of quality organic production through domestically established certification schemes such as (PGS) is also recommended. The study further recommends for policy on facilitation for smallholders' access to capacity building, quality organic production and service provision networks. Smallholder organic farmers are also urged to institutionalize the governance of their groups and formalize all business negotiations and contracts undertaken. All gender biased traditions that prohibit women from participating inorganic farming need to be discouraged. Moreover, as key stakeholders and practitioners to organic farming, agribusinesses are urged to create equitable negotiations and business contracting with smallholders. Donors are encouraged to invest in improving smallholder organic farmers' skills and capacity for markets access. Stakeholders such as International Agencies and NGO are urged to secure networks that facilitate smallholder organic farmers' access to certification, and to quality and quantity improvements.

SUZAMMENFASSUNG

Nachhaltige Landwirtschaft ist eine der wichtigsten Maßnahmen, die zur Erreichung der Ziele für nachhaltige Entwicklung der Vereinten Nationen beitragen. Allerdings war die Landwirtschaft lange Zeit kein Instrument, das zur Linderung der Armut der großen Zahl von Kleinbauern in ländlichen Gemeinden der Entwicklungsländer eingesetzt wurde.Einige der Kleinbauern sind die Hauptakteure nachhaltiger landwirtschaftlicher Praktiken, wie z. B. des ökologischen Landbaus. Neben den natürlichen Ressourcen wie Ackerland und fruchtbarem Boden, Wasserquellen und Humankapital verfügen Kleinbauern in Entwicklungsländern auch über soziales Kapital und soziale Beziehungen. Die Nutzung der Kombination dieser Ressourcen kann dazu beitragen, das Potenzial freizusetzen, indem die Einkommen erhöht, das Wohlbefinden und die Lebensbedingungen verbessert und die Kleinbauern letztlich aus der Armut herausgeführt werden. Trotz ihrer Ausstattung mit Sozialkapital gibt es in der Literatur nur wenige Belege dafür, wie Kleinbauern die Aspekte des Sozialkapitals in Form von Kooperationen und Netzwerken nutzen, um ihre Marktteilnahme zu verbessern. Die vorliegende Studie füllt diese Lücke, indem sie die Rolle des Sozialkapitals für die Marktteilnahme von Kleinbauern in Tansania untersucht. Die Studie untersuchte insbesondere die Arten von kleinbäuerlichen ökologischen Landwirtschaftssystemen, die in den beiden Regionen Kilimanjaro und Morogoro zu finden sind. Anschließend wurde untersucht, wie die interne Zusammenarbeit und die sozialen Netzwerke die Marktteilnahme von Kleinbauern in ausgewählten Regionen beeinflussen.

Die Studie untersuchte insbesondere, welche Arten von kleinbäuerlichen Systemen des ökologischen Landbaus es im Untersuchungsgebiet gibt. Anschließend wurde untersucht, wie die interne Zusammenarbeit und die sozialen Netzwerke die Marktbeteiligung von Kleinbauern in ausgewählten ökologischen Landwirtschaftssystemen im Untersuchungsgebiet beeinflussen. Die Studie befasste sich ferner mit den politischen Implikationen für die Unterstützung interner Kooperationen und sozialer Netzwerke zur Verbesserung der Marktbeteiligung von Kleinbauern im ökologischen Landbau. Die Studie wurde von der Theorie des sozialen Kapitals (SCT) und dem Sustainable Livelihoods Framework (SLF) geleitet.

Es wurde ein Forschungsdesign mit mehreren Fallstudien angewandt, bei dem drei Fälle von bewusst ausgewählten kleinbäuerlichen ökologischen Landwirtschaftsprogrammen ausgewählt wurden. Dabei handelt es sich um das Organic Vanilla Farming Scheme, das Africado Organic Farming Scheme und das Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme. Für

die Datenerhebung und -analyse wurde ein qualitativer Ansatz gewählt. Im Rahmen dieses Ansatzes wurden Tiefeninterviews mit Schlüsselinformanten aus den Systemen und Regierungsbeamten durchgeführt. Außerdem wurden Fokusgruppendiskussionen (FGDs) mit dreizehn Gruppen von Kleinbauern aus dem ökologischen Landbau in den Programmen durchgeführt. Auf diese Weise konnte ein tiefgreifendes Verständnis dafür gewonnen werden, wie die Gruppen kollektiv Sozialkapital-Attribute einsetzen, um die Teilnahme an den Märkten für ihre ökologischen Produkte zu fördern.Zur Analyse der gesammelten Daten wurde die Methode der Thematischen Analyse (TA) angewandt, wobei die Analyse durch MAXQDA, eine Software für die qualitative Datenanalyse, unterstützt wurde.

Es wurde festgestellt, dass das Organic Vanilla Farming Scheme und das Africado Organic Farming Scheme auf Geschäftsmodellen basieren, die organisierte Kleinbauern und entsprechende Agrarunternehmen umfassen. Das SAT Organic Farming Scheme basiert auf Partnerschaften zwischen der SAT-Initiative und unabhängigen Gruppen von Bio-Kleinbauern.

Mit Blick auf die interne Zusammenarbeit ergab die Studie, dass die Marktteilnahme von Kleinbauern aus ökologischem Landbau in hohem Maße von den in den Gruppen eingerichteten formellen Verwaltungsmechanismen beeinflusst wird. Die Marktbeteiligung wurde auch stark, aber negativ von den geschäftlichen Verhandlungsbedingungen beeinflusst, die in den Systemen bestehen. Darüber hinaus wurde festgestellt, dass die Marktteilnahme mäßig von den internen Qualitätsmanagementmechanismen beeinflusst wird, die von den ökologischen Kleinbauern eingerichtet wurden. Darüber hinaus wurde festgestellt, dass die Marktbeteiligung durch externe Qualitätsmanagementmechanismen und geschlechtsspezifische Belange in Gruppen leicht beeinflusst wird. Was die sozialen Netzwerke und die Marktbeteiligung betrifft, so wurde festgestellt, dass die Marktbeteiligung der Kleinbauern in hohem Maße von den Netzwerken für Ausbildung und Kapazitätsaufbau, Marktzugang, Marketing und Verkauf sowie von den Netzwerken für Qualitätsmanagement und nachhaltige Landwirtschaft in den Programmen beeinflusst wird.

Die Studie fordert die politischen Entscheidungsträger auf, die Institutionalisierung von Kleinbauerngruppen im ökologischen Landbau und ihre Fähigkeit, geschäftlich zu verhandeln, zu stärken. Es wird auch empfohlen, die ökologische Qualitätsproduktion durch einheimische Zertifizierungssysteme wie PGS zu fördern. Die Studie empfiehlt darüber hinaus eine Politik, die den Zugang von Kleinbauern zu Kapazitätsaufbau, ökologischer Qualitätsproduktion und

Dienstleistungsnetzwerken erleichtert. Kleinbauern im ökologischen Landbau werden außerdem dazu angehalten, die Leitung ihrer Gruppen zu institutionalisieren und alle Geschäftsverhandlungen und Verträge zu formalisieren. Alle geschlechtsspezifischen Traditionen, die Frauen von der Teilnahme am ökologischen Landbau abhalten, müssen abgeschafft werden. Darüber hinaus werden die Agrarunternehmen als wichtige Akteure und Praktiker des ökologischen Landbaus aufgefordert, faire Verhandlungen und Geschäftsverträge mit den Kleinbauern abzuschließen. Die Geber werden ermutigt, in die Verbesserung der Fähigkeiten und Kapazitäten von Kleinbauern im ökologischen Landbau zu investieren, um ihnen den Zugang zu den Märkten zu erleichtern. Akteure wie internationale Agenturen und NRO werden aufgefordert, Netzwerke zu schaffen, die Kleinbauern im ökologischen Landbau den Zugang zur Zertifizierung sowie zu Qualitäts- und Mengenverbesserungen erleichtern.

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List of Abbreviations

ACP	Agricultural Competitiveness Project
AMCOS	Agricultural Markets and Cooperative Societies
BMEL	Bundesminesterium für Ernähnung und Landwirtschaft
BOAM	Burundi Organic Agriculture Movement
BTC	Belgian Development Agency
CAGR	Compound Annual Growth Rate
CISTI	Curriculum Implementation Support for Training Institutes
CORI	Center on Rural Innovation
COSTEC	The National Commission for Science and Technology
COVID	Corona Virus Disease
CRDB	Cooperatives Rural Development Bank
DAICOs	District Agriculture, Irrigation and Cooperatives Officers
DAS	District Administrative Secretary
DCED	Donor Committee for Enterprise Development
DFID	Department for International Development
E- IR	E- International Relations
EAOM	East Africa Organic Mark
EAOPS	East African Organic Product Standard
EOA	Ecological Organic Agriculture
EOA-I	Ecological Organic Agriculture Initiative of the African Union
EPOPA	Export Promotion of Organic Products from Africa
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School

FGDs	Focus Group Discussions
FPC	Farmers and Pastoralists Collaboration
G.A. P	Good Agricultural Practices
GDP	Gross Domestic Product
GLOPP	Globalization and Livelihood Options of People Living in Poverty
GMOs	Genetically Modified Organisms
GRASP	Global Risk Assessment for Social Practices
GTZ	Deutsche Gesellschaft für Teschniche Zusammenarbeit
IFAD	International Fund for Agricultural Development
IFOAM	The International Federation of Organic Agriculture Movement
ILO	International Labor Organization
KIHATA	Kilimo Hai Tanzania
KOAN	Kenya Organic Agriculture Network
MDGs	The Millennium Development Goals
MKUKUTA	Mpango wa Kukuza Uchumi na Kuondoa Umaskini Tanzania
MUVIWAPASI	Muunganiko wa Vikundi vya Wakulima wa Parachichi Siha
NACTE	National Council for Technical Education
NBS	National Bureau of Statistics
NEI	Natural Extract Industries
NGO	Non-Governmental Organization
NMB	National Microfinance Bank
NOAF	Network for Organic-eco and Eco-friendly Food and Agriculture
NOAMs	National Organic Agricultural Movements
NOGAMU	Network of Organic Agriculture Movements of Uganda
NOPIP	Ntungamo Organic Product Innovation Platform

OF	Organic Farming
PELUM	Participatory Ecological Land Use Management
PGS	Participatory Guarantee Systems
PHC	Population and Housing Census
RAS	Regional Administrative Secretary
ROAM	Rwanda Organic Agriculture Movement
RSPO	Roundtable on Sustainable Palm Oil
SAT	Sustainable Agriculture Tanzania
SCT	Social Capital Theory
SDGs	Sustainable Development Goals
SLA	Sustainable Livelihoods Approach
SLF	Sustainable Livelihoods Framework
SMETA	Sedex Members Ethical Trade Audit
SOF	Smallholder Organic Farmers
SUA	Sokoine University of Agriculture
TA	Thematic Analysis
TADB	Tanzania Agricultural Development Bank
TAHA	Tanzania Horticultural Association
TanCert	Tanzania Organic Certification Association
TAPP	Tanzania Agriculture Productivity Program
TBS	Tanzania Bureau of Standards
TMEA	Trademark East Africa
TOAM	Tanzania Organic Agriculture Movement
TPC	Third Party Certification
UN	United Nations

UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
URT	United Republic of Tanzania
USD	United States Dollar
USP	Uluguru Spice Project
UWAVAKI	Umoja wa Wakulima wa Vanila Kilimanjaro
VAR	Value-Added Reseller
VLSA	Village Lending and Saving Associations

1 CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

The trends of globalization and changing markets are drawing interest to research how the inclusion of smallholder organic farmers in domestic and international markets contributes to enhancing sustainable livelihoods. This research contributes to the implementation and achievement of goals one, two and thirteen of the Sustainable Development Goals (SDGs) of the United Nations that respectively aim at ending poverty, ending hunger, and taking action on the climate in the globe (UN, 2022). Being one of the key players in the United Nations Goals agenda through their engagement in agriculture, smallholder farmers contribute up to 90% of agricultural production in various agricultural value chains in developing economies (Lowder et al., 2021; FAO, 2019; Wiggins & Keats, 2013; Salami et al., 2010). Apart from that, agriculture is a dependable income-generating and livelihood-enhancing activity among smallholder farmers across the developing world. Besides, agricultural activities are required to be undertaken in sustainable and environmentally friendly systems to reduce the adverse effects on biodiversity and contribute to conserving nature and the environment (Auerbach, et al., 2020; Auerbach & Purkis, 2020; Trooster et al., 2020).

Yet, smallholder farmers are still vulnerable and lack the capacity to fully utilize their potential and capabilities in making agricultural production more meaningful and enhancing sustainable environmental, social and economic livelihoods (Soltani et al., 2013; Partap, 2010). Even though smallholder farmers cultivate and produce food for feeding a substantial portion of the world's population, many of them in developing economies continue to remain poor, food insecure, and cannot easily access high-value-added markets and services (GAFSP Report, 2019; Rapsomanikis, 2015). Investigations on factors that limit the potentiality of smallholder farming in developing economies to bring economic growth and contribute to enhancing farmers' livelihoods while contributing to safeguarding the environment are issues that call for more research. Specifically researched in this study are factors based on the social capital resources that smallholder farmers are endowed with through working together in groups, communities and unions. These factors are reflected in the role they play in enhancing smallholders' participation in markets and the ultimate contribution to the improvement of sustainable livelihoods of smallholder farmers in developing economies.

1.2 Background information

1.2.1 Social capital and smallholders' livelihoods

Participation of rural communities in development activities such as planning and decision-making, management of resources, technologies, extension services and markets, is among the drivers of social-economic advancement and sustainable rural development (Trivelli & Morel, 2021; Akter et al., 2020; Mercado et al., 2018). However rural communities are limited to utilize potential of participating in activities that are necessary for sustainable social, economic and environmental advancement and for the enhancement of livelihoods (Soleimanpour et al., 2019; Chirenje et al., 2013). Within the wider spectrum, smallholder farmers who constitute a bigger proportion of rural populations face challenges to participate in agricultural products markets for enhancing their economic growth and poverty reduction (Baloyi et al., 2023; Barret, 2008). Smallholder farmers in rural communities work with limited access to adequate assets, technologies, extension services and infrastructures. They also lack business and technical skills for value addition among others. These obstacles accelerate the lack of capabilities to actively compete and participate in domestic and international markets of their products (Otieno et al., 2008; Barret, 2008).

Smallholder farmers are not always disadvantaged in using their potential to enhance growth and sustain their livelihoods. Studies have shown the rural populations including smallholder farmers are endowed with comparative advantages that can be used as approaches to address the agribusiness challenges that they face (Xu et al., 2022; Ibrahim et al., 2017; Tham-Agyekum, 2015; Olwande & Mathenge, 2011). Smallholder farmers possess human, social, cultural and natural resources that can be tapped to facilitate the participation of farmer groups in high agribusiness value chains to improve productivity, food security and enhance sustainable livelihoods. Within these endowments, social capital as a resource attribute (Hellerstein & Neumark, 2020; Putnam, 1993; Bourdieu, 1986) and participation as the state of being included (Zana & Abayneh, 2017; Cohen & Uphoff, 1980) to engage in an undertaking are considered to have significant roles in facilitating the growth and advancement of rural communities (Sabet & Khaksa, 2020; Liang & Guo, 2015; Puga & Soto, 2018; Dekker, 2007). Utilization of the social capital supports the desired participation in various undertakings, particularly in rural communities where social economic advancements and resources access, largely depend on collective actions among community members (Ibrahim et al., 2017; Tham-Agyekum, 2015). The utilization of the attributes of social

capital resources is likely to create environments for the creation of reliable domestic and local markets for smallholder-based produce and products and reduces pressure on the dependence on export markets. The availability and access of markets through the use of social capital resources contributes to enhancement of smallholder organic farmers' sustainable livelihoods.

1.2.2 Smallholder organic farming

Smallholder organic farming is one of the prominent and fast growing agricultural sub-sectors that hold the potential for uplifting smallholder farmers' income (Malek et al., 2019; Ayuya et al., 2015). This practice not only plays a role in ensuring both a sustainable environment and ecological biodiversity which is a global concern, but also reduces reliance on costly chemical inputs and provides a potential for improved smallholder farmers' incomes through organic products' price premiums (Malek et al., 2019; Seufert, 2012). The practice is environmentally sustainable because its mode of production avoids the use of synthetic agricultural inputs that are widely applied in modern agricultural practices causing soil and environmental degradation (Dhiman, 2020; Malek et al., 2019). Moreover, many farmers in developing economies unintentionally do not use synthetic agricultural inputs and poisons because they lack the financial capacity to access such inputs. Though this is often considered "organic farming by default" the practice is not organic farming all. It is just bad farming which uses no inputs and no management. The practice is widely conducted by smallholder farmers essentially for subsistence and the surplus is for commercial purposes to sustain economic livelihoods. Such practices should be distinguished from purposeful management of agricultural production according to organic principles. Since its introduction as a commercial farming production system, purposeful organic farming continues to contribute towards improved smallholders' economic livelihoods. Through the practice, households/smallholder farmers' income levels have improved because of price premiums that are attached to organic products, and because of increased yields and better plant health (Auerbach et al., 2020). With such incomes, smallholder farmers can better cater for social basic needs like education and health expenses. Furthermore, organic farming skills among smallholder farmers have also improved and community benefits and partnerships are also realized through built social capital and human capital among actors (Naqvi, 2009). Market entry barriers are also reduced through the application of approaches like Participatory Guarantee Systems (PGS) by actors in the organic farming systems, allowing for more inclusion of smallholder organic farmers in supply chains (Mashele & Auerbach, 2020; Troosters et al., 2020; Loconto & Hatanaka, 2018).

1.2.3 Smallholder farmer organizations and social capital in Tanzania

As the literature shows, the meanings of the social capital concept vary. Some range from an individual's belonging to a group or a community (Bourdieu, 1986), to the social structures and the networks of civic associations that individuals use for collective actions (Putnam, 1993). It further refers to forms of trust that individuals build within groups or communities (Fukuyama, 1995), or the abilities of individuals, groups and organizations to cooperate and network for common benefits (Van der Ploeg & Marsden, 2008). Even though the conception of social capital is wider, the concept portrays the existence of unionization or belonging and being networked into a group or a community. From belonging, intangible assets and resources exist and individuals or groups benefit by belonging in the networks or associations (Rivera et al., 2018; Wiesinger, 2007; Aleksiev & Penov, 2006; Adato & Dick, 2002).

The literature portrays smallholder farmers in Tanzania, whether in conventional or organic farming as working by belonging in groups, organizations or cooperatives over time (Gores & Kapinga, 2021; Aku et al., 2018; Martinez et al., 2016; Matata et al., 2010; Barham & Chitemi, 2009). Smallholder farmers realize their farming activities by using groups (Mwonge & Naho, 2021; Barham & Chitemi, 2009). Smallholder farmers choose to belong in groups or communities to use this as a strategy for attaining goals that they cannot easily meet individually. With the current movements towards making smallholder farming more meaningful, the government and agribusinesses insist smallholder farmers should be organized in groups to facilitate access and communication logistics among other factors. Moreover, smallholder farmers are observed to be unionized and belonging into primary groups that are based on locations such as villages or wards. Such include for example the Agricultural Markets and Cooperative Societies (AMCOS) (Mhagama & Mmasa, 2022; Israel et al., 2022; Mapunda et al., 2019; Sambuo & Mbwaga, 2017). Furthermore, smallholders in groups get united under an umbrella union that has a broader geographical coverage such as a region and, normally engages in cultivating one crop (Kassanga & Jovin, 2021; Rwekaza et al., 2018; Mhando, 2014; Simmons & Birchal , 2010; Maghimbi, 2010). Such umbrellas are usually called cooperative unions and their coverage is usually a particular geographical location.

Despite the varied purposes for which smallholders unionize and belong to organizations, the primary goal is to enable them to access resources and services that individual smallholder farmers cannot. These resources and services mainly include farm inputs, farm credit, extension services,

agronomic services and access to markets. The belonging of smallholder farmers to organizations or institutions indicates the existence of social capital in organizations. Farmers in cooperation are networked, form structures of performance, have civic unions, trust each other, and imply all the characteristics that characterize social capital.

1.3 Statement of the research problem

Concerns about smallholder participation in various agribusinesses for improved productivity and enhanced livelihoods are drawing research attention (Wangu et al., 2020; Singh et al., 2017; Kaaria et al., 2016). Studies have been conducted to identify areas that require strong smallholder engagement and mechanisms that may be adopted to enable their participation in various levels of agricultural value chains. Contractual arrangements (Bullock, 2017; Singh et al., 2017; Barret et al., 2011; Poole, 2010; Bolwig et al., 2009), certification (Rusli & Fatah, 2022; Meemken, 2020; Ayuya et al., 2015), gender equity (Kassanga & Jovin, 2021; Bullock et al., 2017; Kaaria et al., 2016) and vertical and horizontal integration in production chains (Swinnen et al., 2013) have been studied to foster the search for smallholders' inclusion in such chains. Moreover, smallholder farmers are included as actors in production value chains through various business models to facilitate access to markets for their products (Fayet & Vermeulen, 2014; Byerlee & Haggblade, 2013; Fernandez-Stark et al., 2012; Fischer & Qaim, 2011). Furthermore, smallholder farmers are included in production value chains by using various agricultural initiatives that take farmers as an integral part of the entire agricultural value chain (Sjaw-Koen-Fa et al., 2016; Collier & Dercon, 2014; Sikwela & Mashunje, 2013; Adebayo et al., 2010; May 2008). All these aim at finding means to expand the inclusion of smallholders into agribusiness value chains and ultimately foster and enhance their livelihoods.

The existing body of knowledge on the application of social capital in fostering inclusion into value chains and sustaining the livelihoods of smallholder organic farmers in Tanzania is also recognized (Bakewell-Stone et al., 2008). The literature explains smallholders' belonging into groups, organizations, unions or associations, an aspect which implies the existence of social capital within these forms of associations (Mhagama & Mmasa, 2022; Kapinga & Gores, 2021; Kassanga & Jovin, 2021; Aku et al., 2018; Rwekaza et al., 2018; Mhando, 2014). Literature also explains the challenges that hinder smallholder farmers' effective participation in organic farming markets (Schader et al., 2021; Uhunamure, 2021; Yaméogo et al., 2018; Jouzi et al., 2017; BTC, 2015; Rapsomanikis, 2015; Vaarst, 2010). Notwithstanding these works of literature, there is

insufficient knowledge on smallholder organic farmers' market participation that is achieved through specific social capital attributes that emerge from smallholders belonging to groups, organizations, unions or associations. Instead, challenges that lead to ineffective smallholder farmers' market participation are generically addressed by the overall fact of smallholders belonging to these various forms of associations. Despite being endowed with social capital assets, it is not clearly known how smallholder organic farmers utilize these assets to influence their participation in markets and ultimately attain sustainable livelihoods.

1.4 Research questions

1.4.1 Main research question

The main question that this study intends to answer is:

What is the role of social capital in the market participation of smallholder organic farmers in Tanzania?

1.4.2 Specific research questions

The specific questions that were used to search for answers to the main research question are: -

i. What types of smallholder organic farming schemes are found in the study area?
ii. How does internal cooperation influence the market participation of smallholder farmers in selected organic farming schemes in the study area?
iii. How do social networks influence the market participation of smallholder farmers in selected organic farming schemes in the study area?
iv. What are the policy implications in supporting cooperation and social networks for enhancing smallholder organic farmers' market participation in the study area?

1.5 Significance of the study

The long-term global concern on social, economic and environmental sustainability is highly recognized and addressed from different perspectives. Despite being undertaken by smallholder farmers, particularly in developing economies, organic farming is one of the prominent sectors that play a significant role in promoting sustainability. This study has been conducted with a purpose to contribute to the existing body of knowledge on socio-economic sustainability reflected through smallholders' improved livelihoods that results from smallholder organic farmers' market participation. Specifically, the study has shown potential for smallholder farmers in utilizing

embedded social capital attributes in improving production capacity, but most importantly in expanding their capacity and capabilities in the marketing of organic products locally, domestically as well as internationally thereby improving their livelihoods.

The study has observed underlying sets of social capital attributes among smallholder organic farmers, between them, and with other actors in the value chain. These play an important role in facilitating organic farming business undertaking. However, the study observed limited understanding of the importance of social capital values among the actors, that if well utilized, have the potential in uplifting smallholder organic farming practices and ultimately contributing to sustaining the livelihoods of smallholders. In this regard, the observed social capital aspects can be considered for inclusion in policies and regulatory frameworks for organic farming practices not only in Tanzania but also in other developing economies with similar organic farming undertaking approaches.

This study is significant since it has identified the need for other actors in organic farming value chains to invest more in motivating, enhancing and building capacity for smallholders' utilization of cooperation and social networks for sustainable production and market participation. Such initiatives can focus on better management in formalizing and institutionalizing organic farmer groups, improving farmers' internal quality management mechanisms, and handling the marketing of their organic produces and products. Such initiatives could be accomplished through stronger utilization of social capital attributes of cooperation and social networks.

The significance of this study is also found in the theoretical contribution it has made. The study applied the Social Capital Theory (SCT) and Sustainable Livelihoods Framework (SLF) to guide the study. Putnam, (2001) contends that, social capital is far from being homogeneous, in a way that some forms of social capital maybe good in certain aspects and might not be applicable in others. Similarly, approaches for the application of the theory or framework might differ depending on the settings in which they are to be applied. The study provides a theoretical contribution to the inclusion of aspects in social capital theory that are more reflective and can better address the rural farmer challenges in developing economies. The study also becomes significant through identifying and proposing areas to be researched further. It also adds value through the recommendations on various aspects to be addressed for improving the market participation of smallholder organic farmers.

1.6 Outlines of chapters

This thesis is organized into eight chapters which explain and discuss various aspects that are covered by the study. Chapter one begins with an introduction to the entire study by contextualizing social capital and market participation in the study. It then provides the background information which explains smallholder organic farming, the world view on organic agriculture, the demand and consumption of organic food, the status of smallholder organic farming practices in the African contexts, and an overview of smallholder organic farming undertakings in Tanzania. Moreover, the chapter explains the statement of the research problem and the main and specific research questions that are investigated by the study. Furthermore, the chapter explains the significance of the study and the arrangement of chapters for the entire thesis concluding with a summary of the chapter.

Chapter two presents a review of the literature on the existing body of knowledge related to the study. The chapter defines social capital, dimensions of social capital, social capital attributes, internal cooperation, social networks, market participation, smallholder organic farming, and organic farming schemes as key concepts that are applied in this study. In this part, the chapter presents detailed reviews of the concepts to open up an understanding of the standpoints that the study developed on the concepts. The literature is reviewed showing the empirical status on social capital and market participation. The chapter presents related empirical research from the global and developing economies' viewpoints. The chapter further explains the synthesis of the literature whereby the knowledge gap which forms the focus of the study is identified and clarified. The chapter concludes by providing a summary of what has been presented in the entire chapter.

Chapter three presents the theoretical and conceptual framework of the study. It starts by explaining Social Capital Theory (SCT) and the Sustainable Livelihoods Framework (SLF) and justifications for choosing them for the study. Then the chapter explains the conceptual framework proposed for guiding the implementation of the study. Moreover, the chapter presents the specific and customized conceptual models for the operationalization of the research themes. These conceptualizations are used in finding answers to the research questions. The chapter concludes with a summary of what it has presented.

Chapter four presents the research methodology that was applied in the study. It explains the entire process involved in the research, clarifying the activities that are conducted for the study while providing justifications for the choices of adopted methods. Various methodological aspects such

as the research philosophy and the research design are presented. The chapter goes further by explaining the scope of this study as described in three perspectives. Data types and data sources, data collection procedures and ethical issues considered before collecting data, during data collection and during the analysis, are also explained. Furthermore, the chapter presents methods used in data management, data analysis and interpretation of findings. Lastly, the chapter discusses the validity and reliability of data and data collection techniques and gives the methodological limitations of the study ending by presenting the chapter summary.

Chapter five is about the study area, the demographic and socio-economic characteristics of smallholder organic farmers, and the details of the organic farming schemes. The chapter begins by highlighting Tanzania, providing its location, demographic and economic impressions. Then, it explains the two regions of Kilimanjaro and Morogoro within which the selected cases for the study are found. It gives an overview of the locations, demography, climatic conditions, economic activities, and organic farming practices in these regions. Moreover, the chapter presents the demographic and socio-economic characteristics of smallholder organic farmers in which age, gender, livelihood activities, group characteristics, modes of land access and ownership are explained. The chapter also details the Organic Vanilla Farming Scheme, the Africado Organic Farming Scheme and the Sustainable Agriculture Tanzania (SAT) Farming Scheme that formed the cases of the study. Lastly, the chapter concludes on the aspects that are covered in the chapter.

Chapter six explains the internal cooperation and market participation of smallholder organic farmers in the schemes. It starts by providing background information on the market participation aspects influenced by internal cooperation. The chapter then presents the findings and the analysis of the findings for each of the selected organic farming schemes. The chapter presents cross-case analyses, reconciliation, discussions and conclusions on the findings for the three studied schemes. Lastly, the contents covered in the chapter are summarized.

Chapter seven presents the social networks and market participation of smallholder organic farmers in the schemes. It starts by giving background information on the nature of smallholder social networks in the selected schemes in the study area. Then, the findings and the independent analysis of the findings for each of the selected organic farming schemes are presented. Moreover, the chapter presents cross-case analyses, reconciliation of deviations, discussions and conclusions on the finding for the three studied schemes. The chapter concludes with a summary of what the chapter has presented.

Chapter eight concludes the thesis by giving a summary of findings, conclusions, implications and policy recommendations. It presents the specific and a general conclusion on the research findings, states the theoretical and empirical contributions of the study and the contribution of the study for future research. Moreover, it states the implications of the study findings for policy, practices, and recommends the inclusion of social capital as a factor important to the enhancement of smallholder organic farming market participation. Recommendations are made to various stakeholders such as smallholder organic farmers, agribusinesses and initiatives, the government, international agencies and donor funders interested in supporting smallholder organic farming practices. The chapter presents the limitations of the study, and a summary of what has been covered by the chapter.

1.7 Chapter summary

This chapter introduces this study, which seeks to understand the role of social capital in enhancing market participation of smallholder organic farmers in Tanzania. It begins by providing an overall introduction and background information to the study. The background highlights on smallholder organic farming, the world view on organic agriculture, the global demand for and consumption of organic food and as part of initiatives towards promoting environmental, social and economic sustainability. The background further describes the state of smallholder organic farming in Africa and overview of smallholder organic farming in Tanzania. The Tanzania context highlights the practices and promotion of organic farming and the social capital orientations in smallholder organic farming. The chapter then states the research problem, the main and the specific questions, the rationale for the study, outlines of the chapter contents and a summary of the chapter. The next chapter presents the conceptual and empirical reviews on social capital, market participation and smallholder organic farming.

2 CHAPTER TWO: CONCEPTUAL AND EMPIRICAL REVIEWS ON SOCIAL CAPITAL, MARKET PARTICIPATION AND SMALLHOLDER ORGANIC FARMING

2.1 Introduction

The main objective of this study was to develop an understanding of the role of social capital in influencing smallholder organic farmers' market participation in organic farming schemes in Tanzania. This chapter presents a review of the literature on the main concepts that are used in the study. The chapter also presents empirical evidence on the status and practices on organic farming from the global and developing economies contexts. It further presents empirical research studies related to social capital elements and market participation of smallholder organic farmers. The intention is to see how the concepts are applied in other research for bringing solutions for the intended study problem. Moreover, the chapter presents a synthesis on the reviewed literature to reconcile the deviations in literature and identify gaps in knowledge on the subjects of the study. From the review, knowledge gaps were defined which guided the overall undertaking of the study. The chapter ends with a summary.

2.2 Conceptual review

The review of concepts used in this study focuses on the main and sub-concepts used in inquiries to answer the research questions. These main reviewed concepts are social capital, internal cooperation and social networks. Other concepts are participation and market participation. Smallholder farmers, organic farming and organic farming schemes are also reviewed and included in this review.

2.2.1 Social capital

Bearing different meanings from different social scientists, social capital is defined through a wide range of embodied attributes as propounded by pioneers of the concept (Hellerstein & Neumark, 2020; Gelderblom, 2018; Tzanakis, 2013; Van der Ploeg & Marsden, 2008; Paldam, 2000; Bourdieu, 1986; Putnam, 1993; Fukuyama, 1995). Among the early scholars on the concept, Bourdieu, (1986) views social capital as one's belonging to a group or community that derives actual or potential resources from the existence of formal or informal networks of relationships. On the other hand, Putnam (1993) defines social capital as a component of social structure that includes networks of civic associations that individuals use for cooperation and collective action. The scholar further explains social capital as moral resources of the community such as trust, social

norms and obligations, and social networks of citizens' activities. Fukuyama, (1995) views social capital as trust that is built within a group or community of individuals who work together to attain mutual goals. Van der Ploeg and Marsden, (2008) perceive social capital to be embodied in the abilities of individuals, groups, organizations and institutions to engage in networks, cooperate, employ and use social relations for a common purpose and benefit. Moreover, Coleman, (1998) defines social capital as an aspect of a social structure whose functionality can only be observed through the role it plays in facilitating individuals' actions within such structures.

Looking at these themes, social capital is rooted in creation of intangible assets that are based on individuals' belonging to a group or a community in which they cooperate and use the formal or informal networks of relationships to mutually attain the desired goals of the association (Rivera et al., 2018; Wiesinger, 2007; Adato & Dick, 2002). Like any other livelihood assets, social capital promotes proper access, exploitation and utilization of resources and other opportunities by groups or communities in which these assets are embedded (Aleksiev & Penov, 2006; Adato & Dick, 2002). In this view, literature provides reflections on the use of intangible attributes of social capital to influence access to resources and other opportunities by smallholder farmers.

Given the varied definitions of social capital which are mainly reflected through its operationalization, no single definition can be considered exclusively fit for all studies and cannot be treated as an aggregate trait of large collectivities (Tzanakis, 2013). However, depending on the intended functional role of social capital, a single or a combination of attributes can be applied to find solutions for the intended societal problems. This study proposed to reflect social capital in terms of use of social networks and cooperation among smallholder organic farmer groups to facilitate access to organic product markets thereby promoting their participation in organic farming market value chains.

2.2.2 The dimensions of social capital

Based on a given orientations of social capital, authors distinguish it into various types. One type of social capital is based on how people are connected either within groups or communities or between them and those outside their groups, communities or social cycles. This type of social capital provides the bonding, bridging and linking elements of individuals in groups or communities (Cofre-Bravo et al., 2019; Claridge, 2018; Tham-Agyekum, 2015; Stone, 2003; Narayan, 2002). The other distinctive type of social capital is based on social structures and cognitive orientations. Structural orientation takes concerns on the networks, relationships and

institutions that link people and groups together (Putnam, 2001 in Nyqvist et al., 2013). Structural orientation creates mutual benefits for the members through collective actions which are guided by specific roles, rules and procedures that are established by members (Tham-Agyekum, 2015). Cognitive social capital, on the other hand, is derived from mental processes that are formed from values, attitudes, trust, norms and beliefs of members (Nyqvist et al., 2013). Claridge, (2018) features a combined orientation of social capital in which social capital as structural (connections), cognitive (shared goals and values) and relational (trust between actors) orientations are delineated.

This study could not cover all orientations of social capital, a situation that led to embarking on studying the structural dimension of social capital. Governance mechanisms, group structures, quality management mechanisms, negotiations, networking and information-sharing parameters within the internal cooperation and networks attributes were explored to determine how social capital enhances smallholder organic farmers' market access.

2.2.3 Social capital attributes

The social capital concept has dimensions that are commonly referred to as social capital attributes. These comprise trust, quality of relations, common interest and cooperation, sense of community, culture and tradition within a community (Rivera et al., 2018; Snider et al., 2017; Midgley, 2014; Prusak & Cohen 2001; Paldam, 2000). In other views, social capital attributes include trust, norms and informal rules shared among members of a group, reciprocity, networks, shared knowledge and cooperation (Alexiv & Penov, 2006; Putnam, 1993). Other social capital attributes include institutional arrangements, endogeneity, sustainability and the governance of markets (Van der Ploeg & Marsden, 2008). Within the list of attributes provided by literature, this study adopted social capital as reflected in internal cooperation and social networks among smallholder organic farmer groups. The combination of internal cooperation and social network attributes creates distinct forms of social capital which define its functional role (Rivera et al., 2018; Bongomin et al., 2017; Poole & De Frece, 2010; Alexiv & Penov, 2006). Internal cooperation and social networks are the social capital attributes that were adopted for the study.

2.2.4 Internal cooperation

Cooperation as another selected attribute is reflected through respondents' willingness to cooperate when faced with a collective action, need or problem. Cooperation is built on the spirit of people organizing themselves in groups and working together. It entails assuming responsibilities, sharing, complementing, helping, participating and negotiating within groups. It involves different formal and informal actions that are coordinated by different people or organizations in a negotiable way (Rivera et al., 2018). Depending on the goal of its formation, cooperation can be formally or informally formulated and there is no established form of cooperating. Cooperation is observed as an outcome facilitated by other social capital elements like networks, norms and trust (Rivera et al., 2018; Fukuyama, 2000; Putnam, 1993). Others explain cooperation as a component within a social network (Annen, 2003).

Although there are challenges that are associated with the collective organization, the need for smallholder farmers' collaboration is still significant (Poole & De Frece, 2010). The act of cooperation among individuals or groups provides the potential for overcoming market entry barriers, reducing transaction costs and enhancing supply chain relationships among other economic reasons. Compared to interpersonal trust, social capital attributes of trust and cooperation have significant impacts on economic growth (Knack & Keefer, 1997). Cooperation structures such as mutual confidence among actors, presence of common guiding values, assertion of personal, family and collective identity and greater self-esteem among rural dwellers provide pivotal roles in facilitating achievements in the rural populations (Kiliksberg, 1999).

2.2.5 Social network

A social network refers to a set of relations and additional information that apply to a set of actors and relationships (Prell, 2012). Social capital value is also created through social networks. Usually, social capital has both intrinsic and instrumental notions of the value of social networks. Social capital grounded on social networks is conceptualized on structural features such as strong ties and solid structures. These structures influence social capital in terms of economic productivity, access to resources and transaction costs reduction (Bongomin et al., 2017; Prell, 2012; Putnam, 2001; Fafchamps & Minten, 2002).

Fafchamps and Minten, (2002) contend that better socially networked traders have larger sales and value addition than less socially connected traders. Furthermore, relationships and social networks enable agents to economize on transaction costs. Social capital networks facilitate and promote

coordinated activities and collective decision-making among the rural poor (Bongomin et al., 2017). Through social networks, talents and resources can be combined to support innovations (Faulkner & Nkwake, 2017).

2.2.6 Market participation

Participation as another concept included in the study implies involvement of a significant number of persons in situations or actions that enhance wellbeing such as income generation, security and self-esteem (Cohen & Uphoff, 1980). The notion of participation varies in meaning depending on the addressed contexts. For instance, in agricultural undertakings, participation focuses on interventions that bring together stakeholders to unlock potential towards improvement of income levels and sustain livelihoods (Zana & Abayneh, 2017; Barrett et al., 2011). Such interventions include market participation for enhanced penetration of products into consumer markets (Zana & Abayneh, 2017; Ouma et al, 2010). Others include participation in agricultural schemes like certification schemes to improve product quality and meet required agricultural production standards (Rusli, 2022). It also includes smallholders' participation in contractual agreements with firms to facilitate access to inputs, credit and services in exchange for purchasing rights to agribusinesses (Abbasi et al., 2021; Yeshitila et al., 2020).

As regards market participation, literature explains smallholder market participation in two dimensions. Market participation may be interpreted from the demand side where a smallholder farmer or household may participate in a market as a buyer. It may also be referred from the supply point of view where a smallholder farmer or a household participates in the market as a seller (Musah et al., 2014; Barrett, 2008). Despite these different views, smallholder farmers' market participation is mostly studied from the supply side on various dimensions such as participating in high-value export chains through improved productivity, reduced food insecurity and increased incomes (Maertens et al., 2012). Market participation is also studied in association with factors like transaction costs incurred by smallholder farmers, asset ownership and smallholders' socio-economic characteristics such as age, education and farm size (Musah et al., 2014; Barrett et al., 2011; Jagwe et al., 2010; Ndugire, 2010). Furthermore, smallholders' motivation to participate in markets largely depends on a number of enabling factors such as access to production technology, good institutions and physical infrastructure, public sector engagement and agricultural incentives (Barrett et al., 2010).

This study reflected smallholder organic farmers' market participation in terms of improved capacity gained by smallholders to be engaged in supply chains, their encounters with market entry barriers, and supplying of organic produce and products in distribution channels.

2.2.7 Smallholder organic farming

Literature provides definitions of a smallholder farmer based on several parameters. A smallholder farmer may be defined in terms of physical characteristics such as farm size, income gained, assets and resources, labour, market integration and livelihood diversification (Olofsson, 2023; FAO, 2017; FAO, 2013). A smallholder farmer may also be defined through aspects that limit this farmer from producing at a large scale and to the required quality standards necessary for penetrating the markets. In this context, a smallholder farmer is referred to as a farmer who undertakes agricultural farming activities with limited access to resources (land, funds, infrastructure), low technology and technical know-how for production (Terlau et al., 2019; Christiaensen, 2017; IFAD, 2013). For instance, smallholders work within land access limits in which production is done on a cropland area usually of less than two hectares (FAO, 2013; UNCTAD, 2015; Terlau et al., 2013). In this regard, smallholders usually undertake agricultural production under organized cooperatives, associations and unions, or as out-growers for large-scale agribusinesses. Through such arrangements, these farmers get linked to the markets and obtain different kinds of support. Despite their small-scale agricultural undertakings, smallholders also engage in organic farming. Smallholder organic farmers referred to in this study, are the smallholder farmers organized in formal groups to undertake organic farming for commercial purposes under specific organic farming schemes that practice agribusiness in the study area. The adoption and commercialization of organic farming by these smallholder farmers makes a significant contribution to improving their economic growth and sustaining their livelihoods.

Organic farming is distinguished as a specialty production that deals with production of goods and services that are economically, socially and environmentally friendly (Auerbach et al., 2020; Trooster et al., 2020; Quoquab et al., 2017; Scot et al., 2013; Mercati, 2016; Waite, 2013; DCED, 2012). It is an agricultural practice that facilitates shifts in consumption behaviour to consumption of organically produced products (Mayank & Amit, 2013; Shabani et al., 2013; Sogn & Mella, 2007). IFOAM defines organic agriculture as a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines

tradition, innovation, and science to benefit the shared environment and promote fair relationships and good quality of life for all involved (https://www.ifoam.bio/why-organic/organic-landmarks/definition-organic). Moreover, BMEL, (2022) defines organic farming as a specialty resource-efficient and environmentally compatible form of agriculture which is based on the principles of sustainability and sustainable development. Within the wider scope meaning of organic farming, this study referred to organic farming as a sustainable, agro-ecologically based cultivation of crops that is undertaken by smallholder farmers working under specific organic farming schemes in the study area. It involves smallholder farmers who are engaged in the production of organic fruits, vegetables, and spices.

2.2.8 Organic farming scheme

Despite this study referring to it as an organic farming scheme, literature has not specifically defined "a scheme" separately within the organic farming undertaking. The focus has mainly been in explaining an arrangement or a program that provides services to support farming practices that engages in production of organic foods (Ayuya et al., 2015; Randall & James, 2012). In another context, an organic farming scheme largely involves contractual arrangements between large-scale producers and smallholder farmers to foster more inclusion of smallholder farmers in the organic production value chains (Bolwig et al, 2009; Gibbon et al., 2009).

In the understanding that this study provides, a scheme entails a combination of smallholder organic farming activities that are undertaken in partnership with an agribusiness, that can be a company or firm, or a not-for-profit initiative. An agribusiness can be a partner to provide agronomic technical support, inputs, infrastructure, certification systems, product markets and many more. An agribusiness can be a firm that serves as the market to the organic farming business or an initiative that serves to promote organic farming. An agribusiness can, on the other hand, be a private or not for profit initiative that aims to facilitate sustainable farming activities by engaging smallholder organic farmers in a value chain. The cases that are used by this study are not principally defined as schemes but are conceptualized by the study to form schemes to get the focused context. The use of the term in this context does not entail the normal predefined farming schemes that are existent and operate agricultural activities. It is limited to the context that this study invented to name the combination of activities that involve smallholder organic farmers and agribusinesses.

2.3 Empirical reviews on organic farming, social capital, market participation and smallholders' livelihoods

The study drew empirical evidence on the status and practices of smallholder organic farming on sustainable livelihoods in global and developing economies. In line with this evidence, the study reviewed the empirical research studies related to the roles played by social capital aspects in enhancing smallholder farmers' market participation in the global and developing economies contexts.

2.3.1 Global status and practices in organic farming

The global perception of organic farming lies in the sustainability aspect, whereby organic farming practices connote production that is in favor of environmental or ecological protection as compared to conventional agricultural production (Quoquab et al., 2017; Scot et al., 2013; Waite, 2013; Mercati, 2016; DCED, 2012; Mayank & Amit, 2013; Shabani et al., 2013). The practice is observed to be environmentally friendly and it provides grounds for biodiversity preservation and reduces climate change effects. These effects mainly result from the greenhouse gas emissions and application of conventional farming methods such as the use of agrochemicals and Genetically Modified Organisms (GMOs). An estimate of 500 million smallholder farmers globally depends on agriculture for sustaining social and economic livelihoods (Poole, 2017). Nevertheless, triggers for the adoption of organic farming practices lie in consumer perceptions and preferences on organic production which differ among regions worldwide.

In the European countries for instance, apart from health benefits observed through organic product consumption, consumers are even more concerned about the environment, climate protection and animal welfare (Meemken & Qaim, 2018). In developing countries, on the other hand, knowledge of organic farming practices is considered to be low among many consumers (Altenbuchner et al., 2014; Sharma & Singhvi, 2018; Meemken & Qaim, 2018). These countries have few consumers who are oriented to the consumption of organic products. Most of these are the ones who can afford the prices that are set to organic products and are mostly located in urban areas. Consumer preferences towards the adoption of organic consumption in this region are also attached to the health benefits that are associated with the consumption of organic food products as compared to conventional products (Meemken & Qaim, 2018; Sharma & Singhvi, 2018).

On the other hand, smallholder farmers in developing economies face economic challenges in accessing synthetic farming inputs necessary for conventional farming methods (Schader et al.,

2021; Gartaula et al., 2017; Miyashita, 2015). As a result, they opt to undertake unguided farming practices that do not follow rules, regulations or standards for a specific farming method like conventional or organic farming. The practice is, however, mistakenly referred to as "organic by default" simply because no synthetic chemical inputs like fertilizers and pesticides are involved during crop cultivation. When smallholders are unable to access supplies of chemical fertilizers that are normally supplied by authorities, the result is sometimes described as organic farming by default. The practice is nonetheless not organic at all since it does not follow rules, conditions, guidelines and standard specifications for organic farming. Regardless of its default nature, it is considered to contribute differently to sustaining livelihoods of smallholder farmers in developing economies (Bennett & Franzel, 2013). However, where the price premiums that are attached to the products trigger the adoption of purposeful organic farming practices in developing economies, despite sometimes lower yields, farmers undertake organic farming practices with expectations to get profit from price premiums (Niggli et al., 2017). Nevertheless, the practice is considered by many smallholder farmers to improve capacity in coping with challenges associated with agricultural production. Engaging in organic farming practices provides smallholders with an avenue for knowledge transfer, flow of information, access to capital and capacity building on a local level (Wollni & Andersson, 2014; Altenbuchner et al., 2017).

Furthermore, organic farming practices have a strong link to initiatives that foster sustainable rural development (Pugliese, 2001). Developing economies adopt organic farming as an approach to improving rural livelihoods (Eyhorn, 2016). However, in developing countries, the potentialities of organic farming are realized when the methods used are technically and economically viable, aspects which still have not been realized by many smallholder organic farmers, unless there has been capacity building and accumulation of social capital (Auerbach, 2020). Smallholder farmers are still facing challenges in the entire organic production, processing and marketing value chain. Lack of ability to meet specified organic standards which usually differ worldwide leading to unfair trade (Uhunamure et al., 2021), and lack of financial capacity to certify and label organic products (BTC, 2015; Mjunguli, 2005; Walaga, 2005) are the prevailing setbacks among many organic farmers.

2.3.2 Demand and consumption of organic food

The demand for organic food appears to be increasing globally and dynamically over time (Wu & Takacs-Gyorgy, 2022; Bazaluk et al., 2020; Nechaev, 2018; Kelly & Metelerkamp, 2015). According to the 2021 FiBL surveys on organic food and drinks, the global market sales reached nearly 125 billion Euros (Willer et al., in FiBL & IFOAM, 2023:22). From these statistics, the United States is leading in the retail sales having a total of 48.6 billion Euros, followed by Germany that has a total of 15.9 billion Euros. France follows Germany with 12.7 billion Euros and China completes the global markets with 11.3 billion Euros (Willer et al., in FiBL & IFOAM, 2023:22). Region wise, examples are from the European Parliament which reports an increase in the development of the European organic food market from 20.8 billion Euros in 2012 to 37.4 billion Euros in 2018 (EU, 2021).

Increased global market for organic foods in recent years are triggered by the COVID-19 pandemic that emerged from 2020 to 2022. Despite the health and socio-economic impacts caused on many sectors worldwide, for the organic agricultural sector, the pandemic has been a blessing in disguise. Since its outbreak, consumers' health, wellness and nutrition concerns have increased, leading them to shift their consumption demand patterns, perception of and attitudes towards organic food products (Brata et al., 2022; Sahota, in IFOAM & FiBL, 2021; Xie et al., 2020; Wachyuni & Wiweka, 2020). The continuous rise in global demand for organic food products is expected to continue following the resumption of companies' operations and adaptation to the new ways while recovering from the impacts of the pandemic.

Organic food product sales are also reported to have risen steadily over the past thirty years, organic food and drinks sales reaching 92 billion Euros in the year 2017 (Willer, 2020) and 125 billion Euro in the year 2021 (Willer et al., in IFOAM & FiBL, 2023). Nevertheless, the development of regional markets for organic products is observed to be particularly strong in countries like Brazil, China, Indonesia, South Korea and India (Willer et al., in IFOAM & FiBL, 2023; Sahota, in IFOAM & FiBL, 2021). The demand for organic foods is more concentrated in North America and in Europe, the regions which comprise almost 97% of the global revenues from certified organic products (Sahota, in IFOAM & FiBL, 2021; Golijan & Dimitrijevic, 2018). The rise in consumer demand for organic products in Africa is, however, recognizable (De Bon et al., 2018; Kisaka-Lwayo & Obi, 2014). Such demand increase is explained by growth in local markets for certified organic products in European and African countries. Even though target markets for

certified organic products from Africa are often beyond Africa's borders, there is an observable growth in local markets for certified organic products in some African countries such as Egypt, South Africa, Uganda, and Kenya (Auerbach, et al., 2020; Kelly & Metelerkamp, 2015; Kisaka-Lwayo & Obi, 2014).

The growth in demand and respective supply of organic food products have trickle-down effects on the social-economic well-being of smallholders who are producers of such products. In India, for example, livelihoods improve sustainably through organic farming practices which are reflected in terms of improved soil fertility, stabilized yields, and reduced production costs. Such improvements enabled farmers to access markets with higher prices and reduced farmers' dependence on loans and money borrowing (Eyhorn, 2016).

2.3.3 Smallholder organic farming in Africa

Organic agriculture in Africa plays a significant role in contributing to realization of SDGs, through addressing issues related to food insecurity, land degradation, climate change and poverty in Africa. During the 4th African Organic Conference (AOC) in Dakar Senegal, it was agreed that Ecological Organic Agriculture contributes to the African Union´s Agenda 2063 and the SDGs (Gama, 2019).

Africa benefits from smallholder organic farming opportunities associated with environmental protection, improved economic status and enhanced social benefits among farmers. The potential of organic farming for enhancing environmental sustainability is recognizable. Organic farming best conveys biodiversity protection, improves soil fertility, reduces soil, water and air pollution, improves energy efficiency and reduces greenhouse gas emissions (Schader et al., 2021; Troosters et al., 2020; Auerbach, 2019; Adesope et al., 2012; Mgbenka, 2012). The farming system is also suitable for climate change adaptation, creating the potential for building resilient food systems through farm diversification (Schader et al., 2021; Adesope et al., 2012; Mgbenka, 2012).

Regardless of the global skepticism on improving food security in Africa, organic farming is commended for improved productivity and is a viable and sustainable development option, especially for smallholder farmers (Wekeza et al., 2022; Vaarst, 2010). Traditionally, the undertaking of organic farming practices among smallholder farmers is conducted at the individual family level on small portions of land. Farmers often lack capacity and are unable to access various resources necessary for the undertaking and for improving their social and economic well-being. For example, smallholder farmers' access to extensive land, access to appropriate technologies,

information, markets and credits, to mention a few are questionable. Nonetheless, social benefits associated with smallholder farmers' engagement in organic farming practices in Africa are recognizable. The practice is labor-intensive (De Bon et al., 2018). It stimulates social ties among the smallholder farmers and they get encouraged to work in groups and attain the necessary resources. For instance, shared local and indigenous knowledge help the farmers to improve the social capacity and quality, social capital within them and other social organizations, and creates an enabling environment for farmers' capacity building through training and knowledge dissemination (Wekeza et al., 2022; Jouzi, et al., 2017). Moreover, smallholder farmers likely enjoy the social benefits by the formation and good management of farmers organizations through organic farming practices. Such organizations form the bases for farmers' access to land, credits and markets, knowledge exchange and capacity for bargaining power (Jouzi et al., 2017; Paglietti & Sabrie, 2013).

Organic farming practices in the region are however subject to several challenges without which more positive outcomes would be realized for various actors but most importantly through improving smallholder farmers' livelihoods. These challenges relate to overreliance on foreign organic certification standards, low yields, lack of inputs, inadequate research and data, lack of smallholders' knowledge and inadequate access to markets (Schader et al., 2021; Uhunamure et al., 2021; Jouzi et al., 2017; Vaarst, 2010). Regional and national level initiatives are set towards addressing the challenges. For example, potentials for organic sector growth in Africa through an extended local market creation are made through the implementation of approaches such as Participatory Guarantee Systems **(**PGS) (Troosters et al., 2020; De Bon et al., 2018; Loconto & Hatanaka, 2018).

2.3.4 Participatory Guarantee Systems (PGS)

Due to the roles that PGS has been contributing in enhancing management of organic production quality and standards in smallholder organic farming, this study highlights the important aspects that are related to the system. Many smallholder farmers worldwide face quality management challenges and fail to afford the procedures and costs of products certification. In finding ways to address these challenges, IFOAM suggested formulation of domestic and reliable certification schemes that are within the frameworks of smallholder farmers. The International Federation of Organic Agriculture Movement (IFOAM) defines Participatory Guarantee Systems (PGS) as "*quality assurance initiatives that are locally relevant, emphasize on participation of stakeholders,*

including producers and consumers and operate outside the frame of third party certification"(https://www.ifoam.bio/en/organic-policy-guarantee/participatory-guarantee-systems-pgs). PGS are built in active involvement of smallholders, trust, social networks and knowledge exchange and are designed to provide reliable and useful certification schemes besides the costs and processes of third-party certification (Kaufmann et al., 2023; Iannucci & Sacchi, 2021; Roggio & Evans, 2022; Willer et al., in IFOAM & FiBL, 2021). PGS are suggested mechanisms that can be used to guarantee safety and quality standards of smallholder organic products to be supplied in domestic markets. The common guarantee system that many large and smallholder organic producers adopt worldwide is the Third-Party Certification (TPC) in which producers are certified organic by using independently recognized certifiers. With PGS, an authorized domestic agency enables smallholder farmers to guarantee the quality and safety standards of their organic products (Lemeilleur & Ninnin, 2023; Cuéllar-Padilla et al., 2022). This guarantees consumption by sensitive consumers in domestic markets. PGS are intended to certify products for consumers in domestic markets. Despite their domestic nature, PGS can be building steps for further processes to TPC when farmers need to upgrade to international markets.

Smallholder farmers in many parts of the world have adopted and continue to adopt PGS. Statistics indicate an increase in the number of PGS initiatives worldwide. Up to the year 2020, the PGS database indicated the existence of 235 initiatives in 77 countries with over 1.1 million producers certified through PGS worldwide (Castro et al., in FiBL & IFOAM, 2021:158-159). With this development, the eight leading countries in terms of smallholder PGS certified smallholder organic farmers are India, Brazil, Thailand, Uganda, Peru, Bolivia, Vanuatu and France. With respect to the adoption of PGS initiatives in African countries, there is an increase in the number of smallholders and initiatives in PGS. The 2020 statistics indicated that 5,345 of 20,161 smallholder producers are PGS certified with 21 operational initiatives and new ones are developing at the same time (Castro et al., in FiBL & IFOAM, 2021:160). The five leading countries in numbers of PGS certified smallholder farmers are Uganda (2,044), Tanzania (864), Nigeria (706), Burkina Faso (549) and South Africa (331) (Castro et al., in FiBL & IFOAM, 2021:163).

In the developing economies where PGS initiatives are not sufficiently developed, experiences to use regional initiatives has also been an option. In the East African region as an example, the development of the East Africa Organic Trade Mark (EAOM) has been implemented to guarantee and certify varieties of smallholder organic products that are supplied to reliable domestic markets

(Ninnin, 2021; Cannon et al., 2019). Practices of organized farmers, trained and knowledgeable leaders, resourced and coordinated systems and commercially viable and enabled farmers make effective PGS (Ninnin, 2021; Mashele & Auerbach, 2020). With these few cases, the initiatives and practices that indicate the adoption and development of PGS in developing economies cannot be ignored. Despite the challenges associated with PGS by smallholders in African countries, their adoption and development have shown benefits including success in performance of their organic products to domestic markets. The approach has so far triggered local consumption and reduced smallholders' orientation and reliance on export markets (Auerbach, 2020; Mashele & Auerbach, 2020; Loconto & Hatanaka, 2018).

2.3.5 Practices and promotion of smallholder organic farming in Tanzania

Smallholder organic farming is practiced in Tanzania and it begun by the 1990s when the Tanzanian Government launched a program for the promotion and certification of organic agriculture (Mella et al., 2007). Thereafter, regulatory, promotion and certification bodies like PELUM in 2000, TanCert 2003, and TOAM in 2005 were established (Bakewell-Stone et al., 2008; Mella, et al., 2007). Other local and international organizations such as Envirocare, Kilimo Hai Tanzania (KIHATA), Organic Vegetable Farming in Zanzibar, Sustainable Agriculture Tanzania (SAT), EPOPA and GTZ also emerged to boost the practice from production to local and international marketing of the organic products (Arino, 2016; SAT, 2014; PELUM, 2013; Loconto & Simbua, 2011; Mamuya, 2011; Loconto, 2010; TanCert, 2003). Smallholders are also engaged in organic farming undertakings in Tanzania (Arino, 2016; SAT, 2014; PELUM, 2013; Loconto & Simbua, 2011; Mamuya, 2011; Loconto, 2010; TanCert, 2003). Organically produced crops in Tanzania include traditional commodity crops such as coffee, tea, cocoa, cashew nuts and cotton, non-traditional crops such as sesame, vanilla, herbs and spices, and horticultural tropical fruits and vegetables both fresh and dry to cater to domestic and international markets (Bakewell-Stone et al., 2008). The certified organic produce in Tanzania is mainly meant for export markets with inclusion of growth in local and domestic markets.

Engagement in organic farming does not indicate substantial economic impacts on smallholder farmers' livelihoods because of the various challenges that smallholder farmers encounter. Production challenges such as climatic conditions, land accessibility, market infrastructure, access to credits, education and other inputs, hinder smallholders from reaping the benefits of organic farming (Bakewell-Stone et al., 2008). The lack of ability to meet specified organic standards, and

lack of financial capacity to certify and label their organic products are also observable challenges encountered by smallholder organic farmers in this undertaking (BTC, 2015; Mjunguli, 2005; Walaga, 2005). Moreover, smallholder organic farming practices that are undertaken without certification and labeling reduce the credibility of products in organic consumer markets (Bakengesa & Uisso, 2015; SAT, 2014; PELUM, 2013; Rosinger, 2013; TanCert, 2003). As a result, uncertified organic products end up being sold into normal conventional domestic markets with no premium prices since they are regarded as similar to conventional or uncertified organic products (Mbiha & Ashimogo, 2010). Furthermore, the setting up and reinforcement of an institutional policy addressing organic farming in Tanzania is still at the infant stage (Mbiha & Ashimogo, 2010; Mella et al., 2007). The agriculture policy does not provide an appropriate regulatory and policy framework for organic agriculture that is geared towards ecologically sustainable methods (Lwesya, 2018; Bakewell-Stone et al., 2008).

Just like other countries in Africa, in Tanzania, the agriculture policy´s concern and emphasis is largely geared towards promotion of conventional agriculture. Some of the policy guidelines on conventional farming practices do not consider the possible effects to the counterpart farming methods like the organic farming. A good example is the subsidization of synthetic fertilizers, pesticides, and hybrid seeds, and the promotion of the use of chemical sprays like DDT which is meant for controlling malaria in the country (BvAT, 2021; Mbiha et al., 2010). Despite the Tanzania Organic Policy initiation in 2008 (The National Organic Agriculture Development for Tanzania) (Mbiha et al., 2010; EPOPA 2008) the sector is still at its infancy. Following the African Union directives and based on suggested criteria used to measure progress in EOA in African countries, Tanzania is evaluated to fall under the infant EOA sector category (BvAT, 2021).

Despite the bottlenecks, efforts that are directed to upgrading the organic farming sector in Tanzania have been made from various angles. Such efforts include promoting trade and commercialization at national, regional, and international markets to mention a few. One of the remarkable endeavors undertaken to promote the sector in the country is the adoption of PGS certification schemes. Smallholder organic farmers who are normally organized in groups, undergo PGS as an alternative to third party certification which is expensive and yet necessary to meet organic standards for export markets. Adopting PGS certification has reduced pressure on smallholder farmers´ sole dependence on third party certification to meet organic standards for such export markets. With PGS certified, smallholders´ organic produce and products are geared

to meet local and domestic market demands. In 2011, the first PGS groups were established and certified to comply to the East Africa Organic Product Standards (EAOPS) (Ninnin, 2021). The groups received permission to use the East Africa Organic Mark, the Kilimo Hai Mark (Ninnin, 2021; Cannon et al., 2019). All these initiatives were made possible under the supervision of Tanzania Organic Agriculture Movement (TOAM). Today, PGS certified organic producers have tremendously increased. More than 2000 organic producers across the country are now PGS-certified (Ninnin, 2021; Cannon et al., 2019). PGS has been observed by many smallholder organic producers as: an opportunity to improve the living conditions; means to acquire new skills; improve their networks within communities and beyond; and as a platform that promotes knowledge exchange (Cannon et al., 2019; Kirchner, 2014).

With PGS initiatives some positive effects resulting from conversion from conventional to organic agriculture in some areas in Tanzania are also observable. In Meatu District which is found in the Northern part of Tanzania for example, smallholder organic cotton farmers have gained benefits such as increased cotton yields, increased income, and access to more stable markets resulting from established long term contracts with agribusinesses (Altenbuchner et al., 2014 in Andeberg, 2020).

Nevertheless, regardless of the low policy profile addressing organic farming practices in Tanzania, the government promotes the practice through various initiatives. For example, organic agriculture is clearly in line with the government's development strategies and international framework to which Tanzania is a signatory. Such include the Agenda 21, the World Food Summit, the United Nations Sustainable Development Goals (SDGs), and the Millennium Development Goals (MDGs) (Wekeza et al., 2022; UNDP, 2015; Bakewell-Stone et al., 2008). Some programs such as the National Organic Agriculture Development Program for Tanzania (2009-2015) have also been established in line with the National Strategy for Growth and Reduction of Poverty (MKUKUTA). The program envisions creating a vibrant organic sector for improved livelihoods, environmental and economic sustainability, and ultimately improved food security and poverty alleviation in the country (NOAF, 2008). The Tanzania Organic Agriculture Movement (TOAM) and the national organic certification body TanCert were also established to foster the development of the organic farming sector. Furthermore, the Ministry of Agriculture has also shown support by providing organic farming training to some extension officers and has involved public research institutes in fostering this agricultural segment in collaboration with private sectors which are

prominently taking the lead in supporting the organic farming sub-sector (Mbiha & Ashimogo, 2010; Severin et al., 2016).

In efforts to develop the sector, the government through the Ministry of Agriculture and National Council for Technical Education (NACTE) in collaboration with initiatives such as SAT are also working on the inclusion of organic farming programs in the academic curricula for some of the agricultural colleges in the country. The aim is to have knowledge expansion on organic agriculture for the current and future good practices, improved production, processing and marketing of organic products, escalated government revenues and economic wellbeing among actors. Farmer groups also constitute the key role players in fostering organic farming in Tanzania. The role of smallholder farmers is well observed at the production level where they must ensure quality and volumes of organic products are attained for access to markets (Severine et al., 2016).

2.3.6 Empirical research from developing economies' contexts

Some researchers in developing economies have undertaken studies that are related to smallholder farmers' social capital on market participation. Bebbington and Perreault, (2008) identify that social capital formation has broadened household and community access to financial, natural and human capital and has enhanced rural livelihoods in Ecuador. These linkages among the rural communities enhance their capacity to deal with the state, market and other actors in civil societies. Fan and Garcia, (2018) investigated information access and smallholder farmers' market participation in Peru. The study uses information and communication technology in which the internet and mobile phones are used as means of communication. The findings indicated that the two means of communication have spillover effects on farmers market participation with the internet having larger effects than the phones.

Wambugu et al., (2009) researched the effects of social capital on the performance of smallholder groundnut producer organizations in Kenya. The study found social capital to have a positive influence on performance. Social capital creates an enabling environment for their organizations to improve the level of commercialization of that crop product. The improved commercialization in turn creates the capacity to reduce poverty among rural producers in Kenya. Thindisa and Urban, (2018) examined the role of human-social capital and market access factors on influencing participation in agro-processing by smallholder agri-preneurs in South Africa. The study found both human and social capital have a positive and significant contribution to small-scale

agri-preneurs' participation in agro-processing. Moreover, these factors take into consideration the market access and transaction cost factors on agri-preneurs' participation.

Researching on social capital on performance of small-scale agro-food processing enterprises in Tanzania, Seluhinga, (2022) focused on social capital aspects of membership and trust on overall performance of enterprises. Social capital was found to be a crucial component in determining the performance of an enterprise. With improved facilities, social capital increases marketing capacity and production of quality products that meet the industry standards. While investigating on social networks as a social capital component, Zuwarimwe and Kirsten, (2020) addressed the social network on the development of small-scale enterprises in Zimbabwe. The study found that, social networks help enterprises in accessing start-up capital fund and expansion of enterprises. The study also realized that business partners that form a network to enterprises are an important source of resources for enterprises that intend to expand. Kanini et al., (2022) researched social capital and the performance of micro, small and medium scale manufacturing enterprises in Kenya. The study found that relational, cognitive and structural social capital have significant effects on performance of micro, small and medium scale manufacturing enterprises. With it, enterprises' additional and diverse networks help to accelerate innovation that contributes to enterprises' competitiveness. Dlamini et al., (2019) explained the factors that determine the participation of women in maize markets in Eswatini. Social capital, being among the lists of the studied determinants, is found to have impacts on women's participation. However, the study lacked detailed analysis on which aspects of social capital that were used.

Abate et al., (2022) researched the determinants of market participation of smallholder wheat farmers in North Ethiopia. The scholars identified various factors that determine the participation, social capital not being one of the factors that were identified by the study. In similar studies on market participation of smallholder farmers, Kamunye, (2016) studied the determinants of market participation of smallholder common beans farmers in Rwanda using a gender perspective. The study is triggered by the fact that participation of smallholder farmers in output markets is low. The study found disparities in determinant factors between male and female headed families in influencing participation; within these factors, social capital elements were not studied. Further research on market participation is by Hagos et al., (2020) who researched the determinants of market participation among smallholder mango producers in Ethiopia. The study identified social networks as one of the determinant factors among many. However, the study identified social

networks that are based on individual connections to other actors, an aspect that diverges from social networks that are founded in groups to which individual farmers belong and which are unified. Moreover, Hlatwashayo et al., (2021) researched on the determinants of market participation by smallholder farmers. The scholars researched the typology on the level of market participation among smallholder farmers in Limpopo and Mpumalanga Provinces in South Africa. The study found varied factors that determine market participation. Despite not finding social capital related elements in the findings as determinant factors, the study recommends that smallholder grouping and coordination should be among the elements to consider, as they contribute in enhancing support and ease management of farmers for market access.

Regarding social capital and market participation, some studies had some constructs which relate to what this study undertook although some points of divergence are found. Ismail, (2023) researched on the influence of entrepreneurial networks on market participation among smallholder farmers in Tanzania. The strength of smallholders joining entrepreneurial networks which are mediated by digital technology enhances market participation. Despite addressing networks and market participation by smallholders, the research focused on individual smallholder networks that do not originate from belonging to groups or communities, contrary to the social capital focus of this study. Miyattah et al., (2022) researched on social capital and market participation of indigenous vegetable farmers in Kenya. The study reflected on the bonding and bridging dimensions of social capital. Findings indicated the existence of strong bonding effects and weak bridging effects on market participation of indigenous vegetable farmers. However, the research was based more on individually developed social capital elements of bonding and bridging elements of social capital different from what is researched by this study.

Furthermore, a combination of studies explains how various social capital concepts like bonding, bridging and linking help smallholders to overcome value chain constraints beyond the farm gate in African countries. Several smallholder market-related constraints such as poor infrastructure that lead to high transaction costs, lack of information on market prices and technology, inaccessibility to input and output markets, lack of established links to market actors, poor negotiation conditions and contractual arrangements reduce the motive to participate in markets (Kolade et al., 2020; Markelova & Mwangi, 2010). In encounters with these constraints, smallholder farmers in countries like Uganda and Rwanda are found to utilize their collective action in ensuring participation in the agricultural value chain by improving the quality of farm

produce, processing and value addition, thereby maintaining their position in the market (Kolade et al., 2020; Markelova & Mwangi, 2010).

2.4 Literature synthesis and identification of the research gap

In one part of the empirical review, the reviewed viewpoints explained the status and practices of organic farming from the developing economies' contexts. Smallholder organic farming is portrayed as having many challenges and it has not realized its potential for enhancing the livelihoods of smallholders in a sustainable manner. Various initiatives are proposed for addressing the challenges and fostering growth of the sector. Referring to Tanzania as an example, literature reports on initiatives that are taken which range from the establishment of national programs such as the National Organic Agriculture Development Program for Tanzania, the formation of the Tanzania Organic Agriculture Movement (TOAM) and the national organic certification body TanCert. Others include the implementation of approaches such as the Participatory Guarantee Systems (PGS) that are thought to enhance smallholder organic farmers to access markets and contribute to the growth of the sector. The referred empirical literature does not provide information on how realization of such initiatives can be achieved through social capital attributes imbedded in smallholder organic farmers.

The presented empirical reviews deviate from the themes of this study. Some of these researchers have investigated factors that influence smallholders' market participation, or performance of smallholder farming. Among these, many have identified varied factors that influence smallholder market participation, but social capital does not feature among them. Those few studies that earmarked social capital to be among the influencing factors, do not specify the sort of participation that smallholders are involved in, or they resorted to explaining the overall performance and not market participation. Moreover, the empirical researches that have unpacked social capital related to social networks, cognitive capital or relational capital examined the concepts on the overall performance of smallholder farming without their influence to market participation. Closer to the themes that are studied by this study, some empirical research examined social networks or entrepreneurial networks on market participation of smallholder farmers. However, the social networks or entrepreneurial networks that are studied are based on individually built networks and not on a social belonging into groups, communities or unions of smallholders.

Reflecting further on the reviewed empirical studies which focus on the crop farming system, namely, smallholder organic farming, scant literature has addressed social capital and

smallholders' participation in organic products markets. This gives one of the justifications for examining the role of social capital on market participation of smallholder farmers engaged in organic farming. Organic farming is a specially characterized farming system whose benefits to the environment, to the natural biodiversity, to healthy food consumption and sustainable development are enormous. Decisively, literature that is completely aligned to the themes of this study is lacking from the existent empirical literature. Literature addresses deviations in the social capital and its attributes, in market participation and its elements in the adopted farming system. Literature lacks adequate discussions on the role of social capital attributes of internal cooperation and social networks in influencing market participation of smallholder organic farmers in Tanzania. This is the deficient knowledge that this study explored.

2.5 Chapter summary

This chapter has presented a review of the literature that focused on the conceptual and empirical reviews. It has begun by presenting the conceptual definitions and clarifications of the key concepts that have been used in the study. The chapter has also presented the empirical viewpoints on organic farming from the global and developing economies contexts. Empirical research studies that are related to social capital and market participation of smallholder organic farmers from different contexts of economies have been presented. Moreover, the chapter has presented a conclusive synthesis on the reviewed literature to address the deviations in literature and identified the knowledge gap relevant to the study. The chapter concludes by presenting this summary of what it has covered. The next chapter presents a theoretical review and the conceptual and operational frameworks of the study.

3 CHAPTER THREE: THEORETICAL REVIEW, CONCEPTUAL AND OPERATIONAL FRAMEWORKS OF THE STUDY

3.1 Introduction

This chapter is a review of theoretical literature and conceptualizations relevant to the study. The chapter generally explains the theories and the conceptual and operational frameworks that have been adopted in the study. It begins by giving explanations on the theories adopted by the study and the relevance for them being selected. Thereafter, it presents the conceptualization by a framework that guided the execution of the study. The chapter also explains the ways the constructs of the study were defined and operationalized. This includes defining the key constructs and the operationalization of the variables. The operational framework formulated the categorizations of themes, variables, indicators of variables and the scales that were used to measure the variables. The chapter concludes with a summary of what it covered.

3.2 Theoretical Framework

The Social Capital Theory (SCT) and the Sustainable Livelihoods Approach (SLA) through its Sustainable Livelihoods Framework (SLF) are the theories that guided the undertaking of this study. The contentions of the theories and their link to this study are explained.

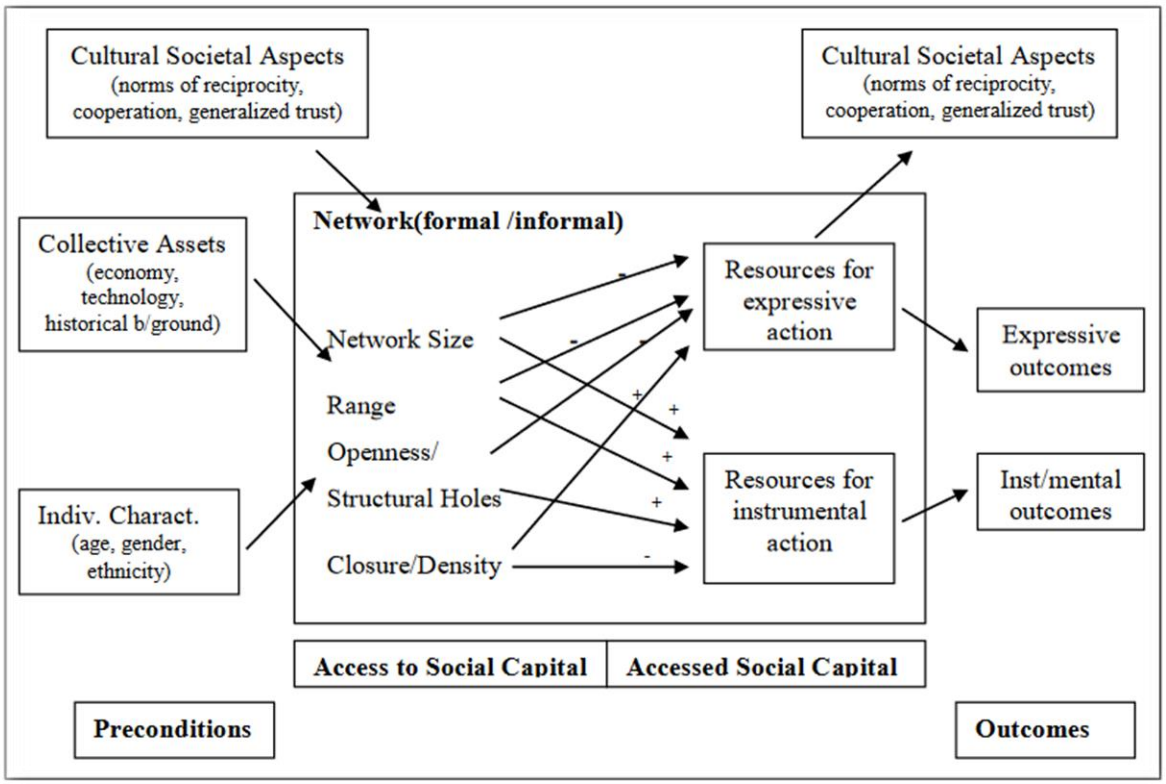
3.2.1 The Social Capital Theory (SCT)

The contention of the social capital concept emphasizes how the nature and relationships among individuals are hidden resources that play significant roles in the reciprocal success of working together of individuals, families, work organizations or communities (Rivera et al., 2018; Häuberer, 2011; Lin, 2008; Lin, 2001; Nahapiet & Ghoshal, 1998; Putnam, 1993). The theory is conceptualized within the wider coverage of concepts that revolve around resource network relationships from social capital elements that are embedded in working together by individuals or groups to attain the desired outcomes (Rouxel et al., 2015; Häuberer, 2011; Lin, 2001). Also, social capital has effects on peoples' capabilities to organize themselves for development.

The theory includes actors who are either individuals or collectives (organizations, communities, unions or groups) who work together to achieve common outcomes. The outcomes are attained by the following two types of goals. These are expressive goals such as attaining physical health, mental health and life satisfaction, and instrumental goals such as individual's attainment of economic, political and social resources wellness. These goals are facilitated by the presence of

social resources that are embedded within the actors. The theory further proposes that social capital emerges within structures of relations or networks among individuals or groups. These networks can be open (bridging) or closed (bonding) and they can consist of informal or formal, and institutionalized or non-institutionalized relationships. The formation of networks exists under some preconditions which provide access to social capital. The preconditions include cultural societal suspects such as norms of reciprocity, trust, cooperation and collective assets of the society which include economy, technology and background. Individual characteristics such as gender, age and ethnicity determine the differences in accessing the social networks and social capital that lead to social resources. Moreover, social capital spills over to more cultural and societal aspects beyond the attainment of the intended common goals. Despite some proposed further development (Häuberer, 2011), this is the conceptual understanding of the Social Capital Theory and Figure 3.1 provides its model representation.

Figure 3. 1 The Social Capital Theory Model



Source: Adapted from Lin, 2001 and Häuberer, 2011.

The social capital theoretical framework has been extensively applied in research studies to understand social-economic outcomes variability among different social groups (Wesselow, 2023; Machalek & Martin, 2015). The significance of the theory is also observed in studies on community development perspectives focusing on creating social cohesion and facilitating decision-making processes through participation from individual, community and institutional to societal levels (Bhuiyan, 2011; Kassahun, 2010; Mubangizi, 2003; Bridger & Lulloff, 2000). Moreover, the social capital theory concept has also largely been applied in research studies focusing on creation of livelihood outcomes, particularly for rural poor and marginalized populations (Getz, 2008; Mubangizi, 2003). In line with the previously conducted research studies, the social capital theory was also adopted because of its suitability for this research study. The operationalization of the theory is hinged on, among other factors, the connectedness, and collective action among people (Getz, 2008; Pretty, 2003). These create an enabling environment for accessing and managing resources, and for drawing more participation of these people in different levels of production for attaining sustainable livelihoods.

The social capital theory was considered relevant for the study since it covers the two parameters of social networks and cooperation. The parameters form the basis for smallholder organic farmers' engagement in organic production in the selected cases of smallholder organic farming schemes. However, the study focused on the structural elements (existence of network ties, roles, rules, precedents and procedures) rather than the cognitive and relational elements (attitudes, social norms, values, beliefs, trust and reciprocity) of the social capital (Claridge, 2018). The study adopted the structural elements of the theory since smallholder organic farmers' engagement in organic farming practices and access to markets in the study area largely rely on created network ties between the farmers and other actors within the production value chains. Nevertheless, due to the nature of the organic farming practice itself (not allowing the use of chemicals) and given the population groups that undertake the practice (smallholder farmers in groups), setting rules and procedures, assigning roles and setting precedents are of vital importance in fostering the organic production in the selected cases in the study area, so that there is purposive management of quality. The structural elements of social capital such as structures and governance mechanisms, negotiation conditions, quality management, forms of information and how it is exchanged were analyzed under the selected social capital dimensions of the study.

The conceptions of the Social Capital Theory (SCT) were adopted in which the two attributes of internal cooperation and social networks guided the undertaking of this study. The study applied the theory in exploring how the nature of internal cooperation existing among smallholder organic farmers in the selected organic farming schemes, and social networks created by the smallholder organic farmer groups, facilitate the mutual attainment of the desired outcomes. In particular, the theory was used in examining how smallholder organic farmers in different groups (embedded with social capital attributes) take advantage of internal cooperation and social networks to access markets in the best ways for their organic products. Enabling smallholder organic farmers to access markets through internal cooperation and social networks fosters their market participation, enhances their economic growth, and ultimately sustains their livelihoods. These are the ultimate desired outcomes of smallholder farmers' engagement in organic farming.

3.2.2 The Sustainable Livelihoods Framework (SLF)

This study also referred to the Sustainable Livelihoods Approach (SLA) and adopted one of its frameworks, the Sustainable Livelihoods Framework (SLF) (Presented in Figure 3.2) for seeking answers to research questions. The SLA applies a general perspective in the analysis of livelihoods by identifying areas of intervention and providing a livelihood strategy and effective means of poverty reduction (DFID, 2001; Krants, 2001; Chambers & Conway, 1999). The SLF as part of the approach is designed to provide a common conceptual tool for examining the ways in which research and technologies fit into the livelihood strategies of vulnerable individuals and communities. It is a tool that is used for analyzing the diverse livelihoods of the rural poor, their access to resources, and various ways in which different factors at micro, intermediary and macro levels contribute to enhancing their livelihoods (Adato & Dick, 2002; DFID, 2001; Krants, 2001; Chambers & Conway, 1999). The tool is suitable for use in various fields including guiding agricultural researchers to find ways that research can contribute towards poverty reduction. This study adopted the contention of the SLF with respect to organic farming that is undertaken by smallholders who partner with agribusinesses. Smallholder organic farming is a means of earning livelihoods by smallholder organic farmers. In this context, the contents of the framework are adapted with the same meanings.

The Framework holds sixthemes which are livelihood strengths, vulnerability context, livelihood assets, transforming structures and processes, livelihood strategies, and livelihood outcomes. In a broader conception, a livelihood comprises capabilities, assets (both material and social resources),

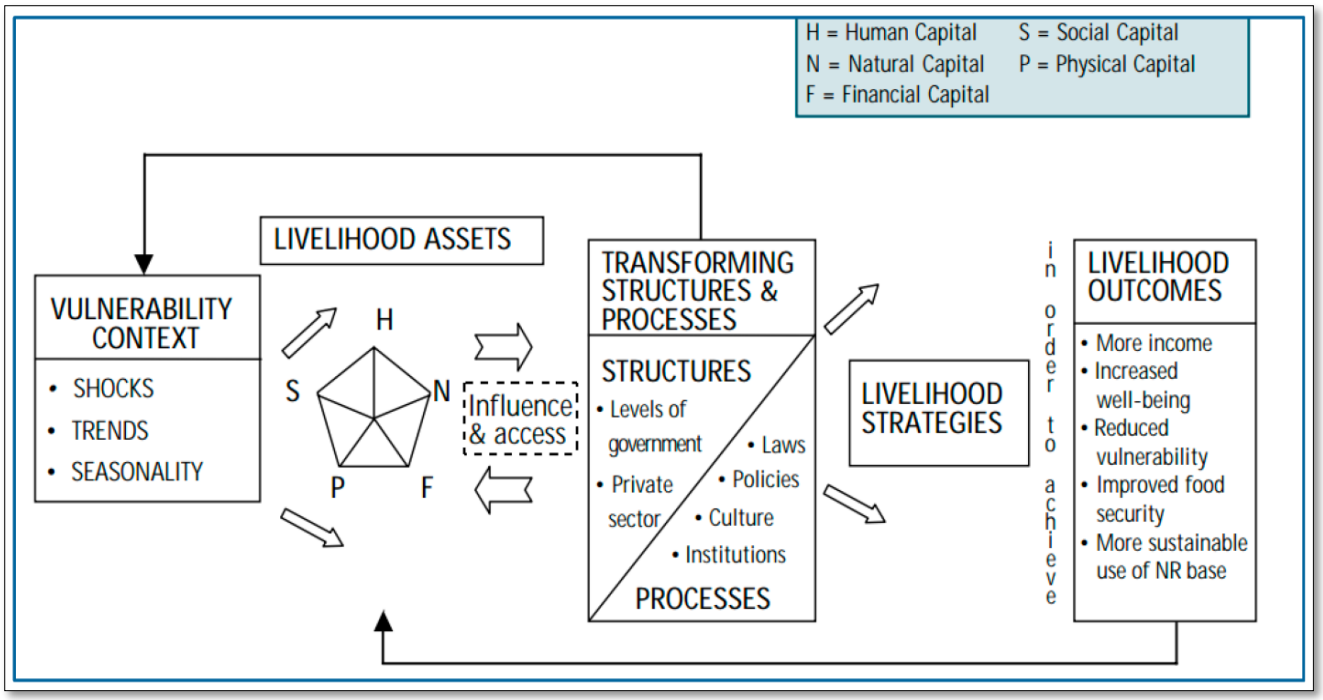
and activities that are required for a means of living (GLOPP, 2008; DFID, 1999:1). The vulnerability context refers to shocks, trends and seasonality that affect people's livelihoods (DFID, 2000:1). These contexts include shocks such as natural disasters, changes in human health, conflicts and sudden economic changes. Trends such as population, technology, governance and prices; and seasonality in production, employment and resources also are vulnerability components of the Framework (Ibrahim et al., 2017, Tao & Wall, 2009, Adato & Dick, 2002; SCF, 2002; DFID, 2001; Krants, 2001; Heffernan & Misturelli, 2000). The other component of the Framework is the five sets of livelihood assets. These assets are the natural capital, physical capital, human capital, financial capital and social capital. Natural capital includes land, water, forests, marine resources, air quality and biodiversity among others. Physical capital includes roads, transportation means, buildings, water supply, energy and technology whereas financial capital includes savings, credits and inflows (Ibrahim et al., 2017, Tao & Wall, 2009; Adato & Dick, 2002; SCF, 2002; DFID, 2001; Krants, 2001; Heffernan & Misturelli, 2000). On the other hand, human capital includes education, skills, knowledge, health, nutrition and labor force while social capital includes networks of trust, working together, access to opportunities, reciprocity, informal safety nets and membership (Ibrahim et al., 2017; Tao & Wall, 2009; Adato & Dick, 2002; SCF, 2002; DFID, 2001; Krants, 2001; Heffernan & Misturelli, 2000).

Furthermore, the Framework is composed of transforming structures and processes that societies use in pursuit of livelihoods. These include institutionalized public and private organizations which operate by structured policies, by-laws, rules, guidelines and institutions to support community adoption and implementation of livelihood strategies (Ibrahim et al., 2017; Tao & Wall, 2009; Adato & Dick, 2002; SCF, 2002; DFID, 2001; Krants, 2001; Heffernan & Misturelli, 2000). Livelihood strategies as another component of the Framework entail mechanisms that communities select within the resources and structures to deal with vulnerabilities and attain positive livelihood outcomes. Livelihood outcomes are feedback on the vulnerability aspects and assets and are meant for buffering the vulnerabilities. Such outcomes include stabilized incomes, increased well-being, food security and sustainable use of natural resources (Ibrahim et al., 2017; Tao & Wall, 2009; Adato & Dick, 2002; SCF, 2002; DFID, 2001; Krants, 2001; Heffernan & Misturelli, 2000).

Reflecting the contents of the SLF for this study, smallholder organic farmers form an integral part of the rural poor who are vulnerable to various agriculture-related shocks. These vulnerabilities include natural disaster shocks, climatic change, pests, disease outbreaks, sudden economic

changes, price fluctuations, resource deficiencies and market shocks (Ibrahim et al., 2017; Tao & Wall, 2009; Adato & Dick, 2002). This study used the SLF to guide the analysis of the role of market access opportunities in counteracting income vulnerabilities to enhance smallholder organic farmers' livelihoods.

Figure 3. 2 Sustainable Livelihood Framework Model



Source: Adapted from DFID 2001.

The framework is adopted in research studies to analyze strategies and mechanisms that create positive livelihood outcomes and reduce poverty among vulnerable rural populations such as smallholder organic farmers (Patnaik & Prasad, 2014; Bennett & Franzel, 2013). Also, the Framework is based on the principles of people-centeredness, responsiveness and participatory processes (Serrat, 2017; Patnaik & Prasad, 2014; Krantz, 2001). Moreover, the approach guides on the application of diversification mechanisms such as income and livelihoods diversification while making the best use of the endowments of livelihood assets. These foster the creation of stability in dealing with long-term trends and coping with stresses and sudden shocks among the poor people to sustain livelihoods (Sharma, 2018; Krantz, 2001).

The framework is relevant for this study since it recognizes smallholder organic farmers as actors who strive to improve their living standards through livelihood diversification. Smallholder

farmers in the selected cases in the study area diversified their income-generating streams from small-scale business and entrepreneurial activities to being engaged in organic production, the production system that demonstrates the potential for raising income levels and improving living standards among these farmers. Moreover, the framework is relevant for this study since it recognizes smallholders' possession of the social capital assets among other assets. The social capital assets exist in form of networks and connections, mutual understanding and support, formal and informal groups, common rules and sanctions, collective representation and mechanisms for participation in aspects such as decision making (Serrat, 2017). In this respect, the framework guided the study on how smallholder organic farmers' possession of internal cooperation and networks as social capital values utilize it to create capacity to participate in reliable markets for their organic products. Enhanced access to reliable markets for smallholder organic farmers contributes to increasing their economic growth and sustenance of livelihoods.

3.3 Conceptual framework of the study

This conceptual framework guided the investigations on the role of internal cooperation and social networks attributes on the market participation of smallholder organic farmers in the study area. The lack of a stabilized or sustained smallholder organic farmers' market participation results from their being vulnerable to various shocks. Such shocks include resource deficiencies, lack of capacity to undergo the production certification process, and their inability to develop and access markets for their organic products (Santacoloma, 2007; BTC, 2015; Rosinger, 2013; Adato & Dick, 2002). It was thought that social capital elements embedded in smallholder relationships and working together within the current environment of supportive social networks could be utilized by smallholders to contribute to buffering them from the shocks and livelihood vulnerabilities.

Conceptually, smallholder farmer groups like any other forms of groups and communities are formed for the purpose of using individual assets and relationships to work together to mutually attain specific benefits and goals. Through working together, farmer groups build intangible bundles of social capital assets that are utilized to attain their intended goals (Rivera et al., 2018; Wiesinger, 2007; Adato & Dick, 2002).

Smallholder organic farmer groups, like other forms of grouping, are endowed with intangible social capital assets which if utilized can advance the performance of organic farming activities. Similarly, selected smallholder organic farmers in the study area hold the potential for utilizing embedded social capital assets through their formulated groups. They have the potential to use

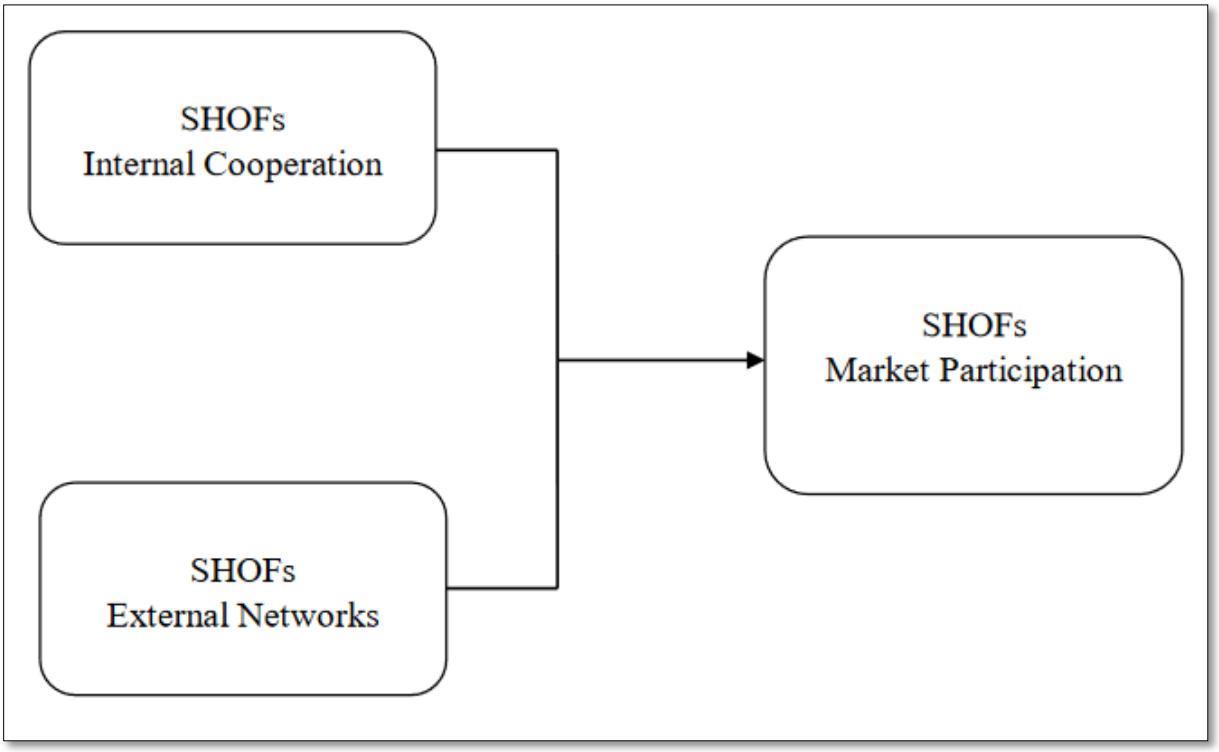
such assets to confront challenges and setbacks they face in organic farming activities and positively influence their participation in the undertaking. Being guided by the SCT and the SLF, the study empirically used the social capital attributes of internal cooperation and social networks to determine the smallholder organic farmers' market participation for the selected cases in the study area. The study conceptualized that the two social capital attributes embedded in smallholder organic farmers influence farmers' participation in organic product markets. The smallholder farmers' market participation was conceptualized to be reflected in the form of organic farmers' ability to establish effective supply chain relationships with other actors in the value chain, in improved supply of organic products in organic market distribution channels, and in overcoming organic products market entry barriers. This conceptualization is presented in a model indicated in Figure 3.3.

An understanding of smallholder organic farmers' market participation was achieved through an investigation on smallholders' capacity to undergo improved access to markets due to internal cooperation and social network attributes that are embedded within smallholder farmers' groups. Based on these measures, the role of social capital attributes in influencing smallholder organic farmers' market participation in the study area was established.

3.4 Operational meanings of the independent variables of the study

The study derived two main categories of independent variables. These are the internal cooperation and external networks. The study defined the independent variable of internal cooperation by including cooperation governance, negotiation conditions and quality management variables within smallholder organic farmer groups. Under the external networks variable, the study defined forms of networks, network governance and information sharing. Below are the explanations that clarify what these variables entail.

Figure 3. 3 Conceptual model on the role of social capital attributes on smallholder organic farmers' market participation



SHOFs = Smallholder Organic Farmers

Source: Researcher's construct after literature review

3.4.1 Cooperation governance

The study examined the structural and institutional arrangements under which smallholder organic farmers cooperate. These two aspects imply the modes in which internal cooperation by smallholder organic farmers is governed. The structural components that were studied include group formality (groups are registered, have formal leadership, have committees and have organized membership), gender composition of group members, and location aspects of group members in the schemes (Bongomin et al., 2017; Prell, 2012; Kiliksberg, 1999). On the institutional aspects, the components that guided the study are the informal or formal modes of governing smallholder farmer groups (Wakaba et al., 2022; Rivera et al., 2018; Van der Ploeg & Marsden, 2008; Alexiv & Penov, 2006). The formal or institutionalized governance entails a system whereby smallholder farmer groups operate under the guidance of formally stipulated rules, by-laws, norms and operational guidelines to lead the conduct and usual undertaking of activities in the groups.

3.4.2 Negotiation conditions

Negotiations that are undertaken by smallholders within smallholder organic farming also formed the structural aspects under which smallholders cooperate. Within the context of this study, negotiation conditions mean the situations for smallholder organic farmers to either access or lack opportunities for negotiations on prices, markets and transaction cost decisions with other actors within the value chain. The study assumed the existence of various conditions for smallholders' knowledge of negotiation opportunities. Such include smallholders' knowledge and capacity in negotiation practices, smallholders' information on the changes in organic products market prices, knowledge and information about transaction costs, and changes in markets and smallholders' bargaining capacity before buyers.

3.4.3 Quality management

In the scope of this study, quality management is defined as the existence of mechanisms that smallholder organic farmers use to enforce compliance to standards and requirements to attain acceptable quality organic products. The used quality management mechanisms include the existence of product control standards, internal quality management and external quality management in smallholder organic farming groups.

3.4.4 Forms of social networks

Forms of social networks entail types of formal or informal connections or collaborations. The study anticipated to find various forms of networks ranging from government, non-government and private business partners, capacity development partners, facilitators, support services, market facilitators and other collaborators that smallholder farmers are connected to.

3.4.5 Social networks governance

The study proposed that social networks have their modes of governance. The governance focused on the consideration of institutional aspects of the networks that smallholder organic farmers create, including whether the networks are undertaken through formal or informal arrangements. The formal or institutionalized governance of networks considers the networks operating under the guidance of stipulated rules, by-laws, norms and operational guidelines (Wakaba et al., 2022; Riveraet al., 2018; Van der Ploeg & Marsden, 2008; Alexiv & Penov, 2006). Conversely, informal governance considers networks to be operated informally without formally stipulated rules, norms or operational guidelines.

3.4.6 Information sharing

Information sharing is one of the aspects that social networks intend to facilitate. Social networks constitute a source of availability and exchange of information that can be used by parties to achieve the intended goals (Häuberer, 2011; Coleman, 1998; Nahapiet & Ghoshal, 1998; Burt, 1992). With social networks, individuals or groups ease the time and resources that are spent to access the required information. In the context of this study, information sharing is expressed in terms of the roles that networks play to facilitate capacity to access information or facilitate availability of information to smallholder organic farmers.

3.5 Operational meanings of the dependent variables of the study

The defined dependent variables of smallholder market participation are the creation of supply chain relationships, supply of organic products into market channels and smallholders' overcoming of market barriers that they encounter in organic farming.

3.5.1 Creation of supply chain relationships

Supply chain relationships can be reflected through strategic relationships, tactical relationships, transactional relationships or internal relationships. Smallholders' engagement in supply chain relationships with actors is an indication that they participate in organic farming markets under their organic farming schemes. Supply chain relationships in this context entail smallholders' integration with other actors in the value chain. This is done through establishing business relationships, setting product supply strategies, handling and managing the transaction costs in the business and managing the supply of organic products in the markets and within entire value chains (Musarra, et al., 2018; Barrett et al., 2011; Ouma et al., 2010; Ndugire, 2010).

3.5.2 Supply of organic products into market channels

The supply of organic products locally, domestically as well as in the export market channels has also been considered by this study as an aspect that gives a reflection of smallholder organic farmers' market participation. The variable was assessed based on the ways smallholder organic farmers use the potential embedded within themselves and among their groups in ensuring organic production in terms of quality and quantity sufficient for penetrating various market outlets (Zana & Abayneh, 2017). Market outlets include local consumer retailing outlets, processing outlets, domestic outlets and international exporting outlets.

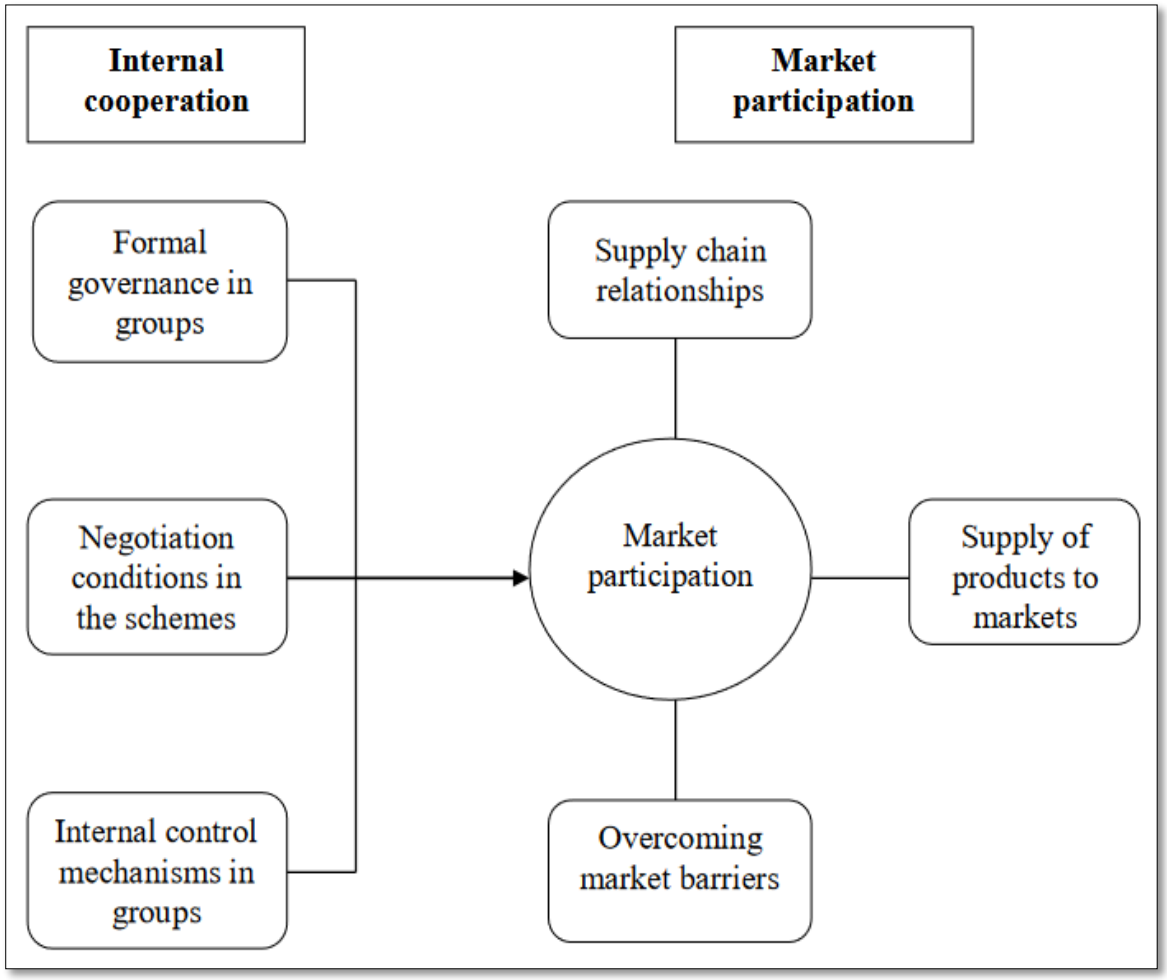
3.5.3 Overcoming market barriers

The study reflected smallholder market participation by looking at the ways smallholder organic farmers overcome the barriers that they encounter when supplying organic produce and products to respective market channels. Many smallholder farmers, particularly in developing countries are subjected to regulations and standards for supplying products to markets, most of which they cannot comply with. Such barriers are for example related to supplying uncertified organic products to markets (Barret et al., 2001). In this regard, unless there are local networks such as PGS (Mashele et al., 2020), consumers assume products to have been produced conventionally (BTC, 2015; Mjunguli, 2005; Walaga, 2005). Smallholders also lack the capacity to add value to products that are necessary for market penetration (Mendoza et al., 2017; Afognon et al., 2015). Moreover, smallholder organic farmers lack the capacity to produce at the required market standards, hence cannot easily supply such products to markets (Uhunamune, 2021; Gadzikwa, 2006). These kinds of barriers limit smallholder organic farmers to participate in respective markets. The study thus considered overcoming market barriers as an important aspect to explain in smallholder organic farmers' market participation.

3.6 Operational models of the study variables

Based on the definitions of the study variables, internal cooperation that is explained through governance, negotiation conditions and quality management was used to explore smallholder organic farmers' market participation. The participation was explored through the mapping of supply chain relationships, the supply of organic products into market channels, and exploring ways of overcoming market barriers. The exploration of these variables is conceptualized through a model that is indicated in Figure 3.4. Moreover, the categorizations of the variables and concepts, and measurements are indicated in Table 3.1.

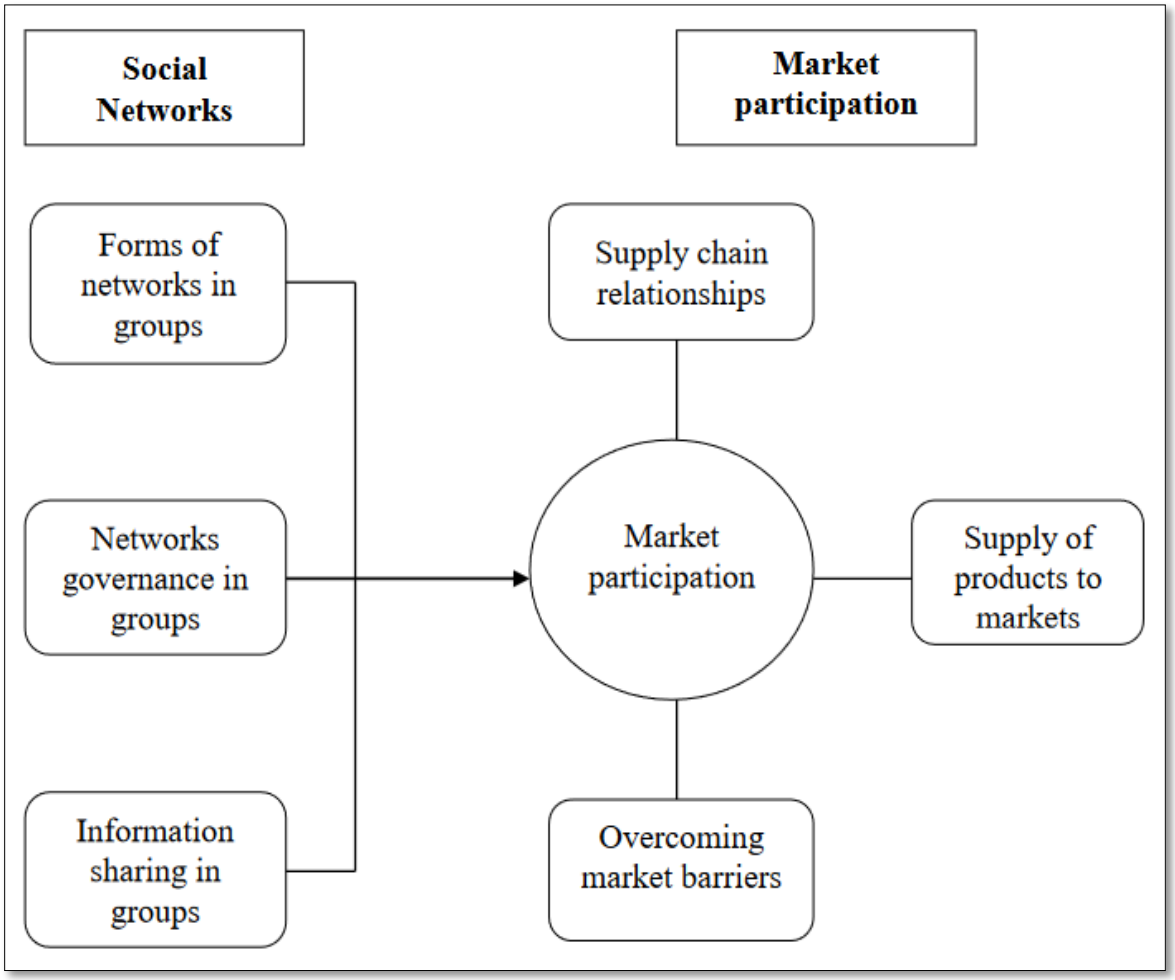
Figure 3. 4. An operational model for internal cooperation and smallholder organic farmers' market participation



Source: Researcher's construction after literature review

On the other hand, social networks that are explained through various forms of networks, network governance and information sharing, entail smallholder external social networks. These are also used to explore smallholder organic farmers' market participation that is observed through the creation of supply chain relationships, supply of organic products into market channels, and overcoming market barriers. The exploration of these variables is conceptualized through a model that is indicated in Figure 3.5. Furthermore, the categorizations of the variables and the related concepts and measurements are presented in Table 3.1.

Figure 3. 5. A conceptual model for external networks and smallholder organic farmers' market participation



Source: Researcher's construction after literature review

The combination of the two conceptualizations as portrayed in Figure 3.4 and Figure 3.5 creates the entire conceptual model of study. It is through this combination that the importance of social capital for market participation of smallholder organic farmers in selected organic farming schemes was explored. Central to this is how social capital, relating to both internal and external networks, helps farmers to access markets by helping them to improve supply chain relationships (empowerment) and to overcome market barriers (capacity building).

Table 3. 1. Categorization on themes, categories and variables explored in the study

Themes	Category	Variable	Variable indicators	Measure/scale(s)
Social capital and market participation	Internal cooperation	Governance structure	Members gender status Informal/formally institutionalized Leadership Rules and by-laws Guidelines Norms and ethical standards	All were captured and measured qualitatively
		Negotiation conditions	On prices and markets On transaction costs	
		Quality management	Guided production Monitored production Compliance to standards Quality compliance	
	Market participation	Supply chain relationships	Business linkages Product supply strategies Managing transaction costs Managing product supply	
		Supply of products to markets	Penetrate products to: - Local consumers Retailing outlets Processing outlets Domestic outlets International outlets	
		Overcome market barriers	Products certification Standards and quality compliance Value addition	
	External networks	Forms of networks	Types of external links Areas of linkages/relationships	
		Modes of network governance	Informal/formally institutionalized Guiding principles Rules, Norms	
		Information sharing	Information access Information use	
	Market participation	Supply chain relationships	Business linkages Product supply strategies Managing transaction costs Managing product supply	
		Supply of products to markets	Penetrate products to: - Local consumers Retailing outlets Processing outlets Domestic outlets International outlets	
		Overcome market barriers	Products certification Standards and quality compliance Value addition	

Source: Researcher's construction after literature review

3.7 Chapter summary

This chapter contributes to the theoretical review of the literature and presents the conceptual and operational frameworks of the study. It begins by deriving and explaining the Social Capital Theory (SCT) and the Sustainable Livelihoods Framework (SLF) as the two theories that were adopted by the study. The chapter has also presented the relevance of selecting the two theories to be used in the study. The conceptual framework of the study which established the link between the social capital attributes of internal cooperation and social networks on smallholder organic farmers' market participation has been presented. Moreover, the chapter has explained and defined the main constructs of the study and the respective variables. The ways in which the constructs of the study and the respective variables were operationalized in the study have also been presented. The chapter has further presented a summary of the categorizations of themes, variables, the indicators of the variables and the scales that were used to measure the variables. The chapter concludes with a summary. The next chapter presents the research methodology that was adopted in the study.

4 CHAPTER FOUR: RESEARCH METHODOLGY

4.1 Introduction

This chapter presents explanations on the methodological approaches that were used in conducting this study. The chapter starts by giving a clear definition of the adopted research approach together with providing justification for its selection. Then, it explains the research philosophy and explains the research design showing the adopted strategy and specific methods that were used in realizing the design. The chapter further explains the scope of the study, the data types and sources and the methods that were used in the collection of data. The chapter goes further by presenting the research's ethical considerations and how they were taken care of in this study. The chapter also gives the analysis process elaborating on how data was organized, transcribed, codified and categorized, and how the study themes were created. The validity and reliability aspects of data are also explained. Lastly, the chapter explains the methodological limitations that were encountered in the study and ends by giving a summary of the chapter.

4.2 Research approach

This study examined the role of social capital on smallholder farmers' participation in markets for organic products and its influence on smallholders' economic growth and sustained livelihoods in the study area. The study is qualitative in nature and a qualitative approach to data inquiry and analysis was adopted to suit the explanatory nature of the study (Creswell, 2014). Qualitative research is based on the assumptions that individuals have an active role in the construction of social reality and that research methods that can capture this process of social construction are required (Boeije, 2010). In this regard, the study adopted a qualitative research approach to depict how individuals in their groups deploy internal cooperation and social networks as attributes of social capital in fostering participation in organic product markets.

Being qualitative in nature, the study employed an inductive process to understand social phenomena that surround the study. Merriam and Tisdell (2016) contend that, though some studies may be considered as typically qualitative, they may occasionally incorporate quantitative components. In line with this argumentation, this study adopted the existing ideas of Social Capital Theory and Sustainable Livelihoods Approach which have been used more deductively as a background to see how the two theories apply in this particular setting (Boeije, 2010).

4.3 Research philosophy

The concepts “research paradigm” and “research philosophy” depict some difficulties for many scholars when using them to explain the orientations of research studies. Given et al., (2008) define a paradigm as a set of assumptions and perceptual orientations that are shared by members of a research community. In this view, paradigms ought to determine how members of research communities view both the phenomena their community studies and the research methods to be applied in studying such phenomena. Other scholars however are of the opinion that, depending on the complexity of some phenomena to be studied, the application of multiple paradigms to adequately address the phenomena may be required. On the other hand, a research philosophy denotes the use of abstract ideas and beliefs that inform research (Creswell & Poth, 2018).

Saunders et al., (2019) delineate how paradigms and research philosophies may be confusing. The authors suggest the importance of understanding the connections between the two terms paying attention to philosophical affinity rather than equivocality of the terms (Saunders et al., 2019: 143). From the qualitative research point of view, scholars suggest that positioning this form of research philosophy among other forms of research is of vital importance. The philosophical positioning or assumptions of qualitative research on many occasions entails what one believes about the nature of reality (ontology), what constitutes acceptable knowledge, and the relationship between the researcher and what is being researched (epistemology) (Saunders et al., 2019; Merriam & Tisdell, 2016; Creswell, 2014). However, the philosophical assumptions for qualitative research further revolve around the role of values in the study (axiology) and the typical methods (methodology) used in conducting the study (Saunders et al., 2019; Merriam & Tisdell, 2016; Creswell, 2014).

These philosophical assumptions, therefore, are well used in describing the nature of a given research study when applied within interpretive frameworks used by qualitative researchers. Based on the perspectives that are used to explain a given research orientation, authors put forward several paradigms or philosophical stances.

Research includes a wide range of research philosophies. Positivism philosophy sees the world as it is and is observed by gathering and using facts and physical evidence. The philosophy strictly relies on quantitative scientific measures and is usually applied to natural science research (Saunders et al., 2019; Creswell & Poth, 2018; Merriam & Tisdell, 2016; Yin, 2016; Creswell, 2014). Post-positivism philosophy on the other hand tries to balance what is believed in positivism and what is pioneered in interpretivism philosophies. The philosophy recognizes knowledge to be

more relative rather than absolute and that researchers influence what they observe, and that may have an impact on the conclusion about the results (E-IR, 2021; Merriam & Tisdell, 2016). Interpretivism is the philosophy that is mostly applied to qualitative research. The standpoint of the philosophy revolves around studying phenomena based on people's values, understanding and experiences. The philosophy emphasizes that research knowledge does not only rely on objective facts, but should also consider subjective views, opinions, emotions and values generated by the studied population within societies. It assumes that the knowledge gained by researchers is more subjective rather than objective (E-IR, 2021; Saunders et al., 2019; Creswell & Poth, 2018).

Among the briefly presented philosophies above, this study adopted the interpretivism philosophical orientation in conducting the research. The philosophy was considered to be relevant for this study because of its philosophical stance. Interpretivism is the most common philosophy applied in qualitative research. In this regard, the philosophy was selected for its suitability for guiding this study since the study adopted a qualitative approach. Methodologically, the philosophy promotes the value of qualitative data in pursuit of knowledge. The philosophy aligns with the primary goal of qualitative research which is to gain in-depth understanding of studied phenomena based on views, opinions, perceptions, feelings and ideas generated by the populations of the study (E-IR, 2021; Saunders et al., 2019; Creswell & Poth, 2018; Chowdhury, 2014). The philosophy was therefore considered suitable for this study since it aligns with the qualitative methodological orientation applied in the study. In capturing the deeper understanding of smallholder organic farmers' market participation in relation to social capital attributes embedded in them, the study inductively applied qualitative methods to capture the studied phenomena by using views and opinions generated by respondents through focus group discussions and in-depth interviews.

Moreover, the standpoint of the philosophy assumes reality to be subjective, socially constructed and with multiple interpretations and meanings aspects which position the philosophy as explicitly subjective (Alharahsheh & Pius, 2020; Saunders et al., 2019; Creswell & Poth, 2018; Merriam & Tisdell, 2016). Within this standpoint, the study obtained answers to inquiries based on the existing reality, in-depth understanding, and experiences of the studied population. It was conducted on smallholder organic farming cases with the assumption that the reality about smallholder organic farming practices and smallholder organic farmers' participation in markets would be generated from socially constructed groups of smallholder organic farmers. Views on the studied phenomena

(internal cooperation and social networks on smallholders' market participation) were clearly explained by actors based on their experiences and practices in organic agricultural business undertakings. From the studied cases, data was gathered basing on the subjective understanding and experiences of the intended respondents. The collected data was then analyzed from particulars to general themes, allowing the researcher to make interpretations (Creswell, 2014).

As argued further, the interpretivism paradigm recognizes observable differences between human beings and physical phenomena (Alharahsheh & Pius, 2020; Saunders et al., 2019). Quite different from physical phenomena, which depend on circumstances, cultural aspects and other factors, human beings are capable of developing meanings about social realities. The paradigm argues for including rich and in-depth insights from studied human beings rather than relying on results from studies conducted only in natural settings. In this respect, the paradigm was considered appropriate for this study since the study intended to develop rich understanding about the reality revolving around smallholder organic farmers' market participation in relation to social capital values attached to them.

Epistemologically, the study has contributed to the existing body of knowledge revolving around fostering the sustainable development agenda observed through improved smallholder organic farming practices and livelihoods. From an axiology perspective, the study is subjective. The key contributions have been made based on researcher's own interpretations of meanings constructed from empirically collected data obtained through focus group discussions and in-depth interviews.

4.4 Research design

The study was conducted by pursuing a case study research design. When a study is conducted for the purpose of developing an in-depth understanding of a bounded system or exploring an issue or a problem in a real-life, in a given setting or context, then the study can be referred to as adopting the case study research design (Creswell & Poth, 2018; Merriam & Tisdell, 2016; Creswell, 2014; Yin, 2014). Yin, (2016) contends that a researcher has an option to use a case study research design as long as he/she can express and defend his/her intention to do a case study because it represents a unique case, deserving to be studied in its own rights. In this regard, case study research design was applied since the study intended to understand how market participation of smallholder organic farmers as a specific group of farmers is influenced by their social capital. As it is contended, a case study involves an in-depth description and analysis of a contemporary bounded system or systems (Merriam & Tisdell, 2016; Creswell & Poth, 2018). The purpose for this study

was to get a deeper understanding on how smallholder organic farmers livelihoods in selected cases may be improved through farmers' engagement in organic farming. Most importantly, the improvement is enabled through the access to markets for their organic products. However, the study assumed that the social capital attributes embedded in smallholder organic farmers who are organized in various forms had a role to play in facilitating better participation in markets.

This study put forward criteria for the selection of cases through which the purpose for the study would be fulfilled. First, the selected cases of organic farming schemes were supposed to have components of smallholder organic farmers who are organized in various forms such as groups, communities, unions, societies or cooperatives. From these smallholder organizational forms, the elements of social capital and their attributes were expected to exist. Secondly, organized smallholder organic farmers were likely to undertake organic farming activities in collaboration with agribusinesses or farmer support initiatives. The collaboration would create an enabling environment for smallholder organic farmers to be included in the organic farming value chain and hence foster the participation in markets for the organic products.

Basing on these criteria, various groups of smallholder organic farmers who are included in organic farming schemes in the study area were selected for the study. The schemes formed the three cases for the study. The selected cases of the study include the Organic Vanilla Farming Scheme that is found in Siha District in Kilimanjaro Region. The scheme consists of smallholder organic vanilla farmer groups that undertake organic farming activities in collaboration with the Natural Extract Industries (NEI) agribusiness and others with the UWAVAKI, an umbrella union of organic vanilla farmers in the region. The second selected case is the Africado Organic Farming Scheme that is also found in Siha District in Kilimanjaro Region. The scheme comprises an agribusiness company, Africado that works in collaboration with smallholder out-grower organic avocado farming groups. This scheme deals with production and export of organic and non-organic avocado fruits by involving smallholder producers as actors in the production value chain. The third selected case is the Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme that is found in Morogoro Region. The scheme is formed by farmers and SAT, which enables, facilitates and organizes smallholder organic farmers. The scheme deals with facilitation in growing and marketing of organic fruits and vegetables by involving groups of smallholder organic farmers in the region.

The three cases of smallholder organic farming schemes in the study area were selected since they were found to fit the purpose of the study. Reflecting on the criteria that guided the selection of cases, the combination of smallholder organic farmer groups and the collaborating organizations were purposely selected for the study. These were thought to provide suitable grounds for capturing the inquiries on themes of the study which are social capital attributes and market participation. As it is contended, a case study involves an in-depth description and analysis of a contemporary bounded system or systems (Merriam & Tisdell, 2016; Creswell & Poth, 2018). In-depth investigations for this study were undertaken for these multiple cases of smallholder organic farmer groups which formed the units of analysis in the selected schemes. These groups appeared to be embedded with social capital attributes of internal cooperation and social networks. A qualitative approach for data inquiry and analysis was adopted to suit the exploratory nature of the study (Creswell, 2014). It involved the use of techniques to capture an in-depth understanding of views on roles of internal cooperation and social networks in fostering smallholder farmers participation in organic products markets.

4.5 The scope of the study

The scope of this study is explained in three dimensions. First, the scope has been defined following the nature of the study which revolves around social capital attributes that are usually demonstrated through groups rather than individually. The scope was thus limited to organic farmers who are organized in groups and working within specified organic farming schemes rather than individual farmers who work independently. On the other hand, the scope for this study was defined based on schemes selection. In this regard, the study specifically involved selecting organic farming schemes that work with smallholders. The involvement of smallholders aims to enhance a commercially sustainable farming orientation yet considering the inclusion of smallholder farmers in the organic farming value chain. The scope of this study was further defined based on the organically cultivated crops in the selected cases. Under this regard, the crops were limited to include fruits, vegetables and tubers that are cultivated by engaging smallholder farmers.

4.6 Data types and data sources

The study used both secondary and primary sources of data. Secondary sources were mainly used to capture information that aimed at providing inputs on the background of the research, defining the research problem and in clarifying the key concepts that are used in this study. The sources

were also used to make references to theoretical and conceptual reviews, to access frameworks and models that provide guidance for this study. The sources were also used for empirical literature reviews that reflect what other researchers have researched in similar spheres to this study. Secondary sources were further used in making references to, and in providing methodological guidance to the study. Secondary data and information were obtained from relevant sources such as research papers, articles from journals, documented case studies, books, policy briefs and reports which were referred to through both physical and online library access.

On the other hand, primary data were collected for the purposes of providing empirical information that answers the research questions of the study. Primary data were empirically collected from smallholder organic farming groups that were obtained from purposively selected organic farming schemes in the study area. Other primary data were empirically gathered from authorities that are responsible for the management and governance of organic agriculture and related practices in the study area.

4.7 Primary data collection procedures

The procedures that were adhered to in the course of collecting primary data included preparation of the research instruments, selection of case studies and administration of the collected data. These are detailed as follows.

4.7.1 Preparation of research instruments

The research involved the use of various research instruments which include an interview guide and a focus group discussion guide. The researcher formulated the two research instruments by developing key guide questions that aimed at guiding the inquiries of questions on the themes of the study. Since the in-depth interviews and focus group discussions aimed at searching for data to feed into the themes of the study, the guide questions were unpacked to capture data at the lowest level of inquiries. Since the research aimed to collect qualitative data, the validity of these instruments was subjected to tests by submitting them to the ethical clearance committee and to other scholars and experts in the field of study to read and comment on the validity of the instruments. Moreover, the instruments were pre-tested with several target respondents in Sabuko, Kyenga, and Tugende smallholder farmer groups before using the instruments for actual data collection.

4.7.2 Selection of case studies

This being a qualitative case study research, a purposive (non-probabilistic) sampling strategy was adopted to select the cases for studying the phenomena. This strategy best suits the purpose of intentionally sampling a group of people that can best inform the researcher about the research problem under investigation (Creswell & Poth, 2018). The study selected cases of smallholder organic farmer groups from the three farming schemes that carry out organic farming activities by engaging smallholder farmers in the study area. A scheme in this study denotes any form of agribusiness arrangement that involves a for-profit firm or a not-for-profit firm or initiative that works with organized smallholder farmers to achieve an organic farming undertaking for a specific market. The study intentionally selected a system of organic agricultural initiatives that involve socially structured groups of smallholder farmers.

In this regard, a purposive case selection criterion was applied (Yin, 2002). Information rich smallholder organic farmer groups were randomly selected from the three schemes for the study. Five smallholder organic farmer groups were selected from the Organic Vanilla Farming Scheme for the study. These groups are Koboko A, Koboko B, Fuka, Mendai and Wanri. Under the Africado Organic Farming Scheme, two organic farmer groups of Kyelokamana and Naibili were selected to provide data for the study. On the other hand, six information rich smallholder organic farming groups were selected from the Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme for this study. These groups are Maendeleo, Masimbu, Muungano, Upatacho, Vijana Amkeni and Vijana Jitahidi. Therefore, a total of thirteen smallholder organic farmer groups were selected from the three schemes for the study.

Moreover, the study selected district officers from the districts to provide detailed information concerning smallholder organic farming practices in the areas. Also, the study selected one key informant officer from each scheme to provide detailed information concerning organic farming in the respective schemes. The district officers and the key informants provided detailed information on smallholder farmers' engagement in the organic farming value chain particularly on their involvement in accessing markets for the organic products.

4.7.3 Administration of in-depth interviews and focus group discussions

The study used in-depth interviews and Focus Group Discussions (FGDs) to collect qualitative data. Face to face in-depth interviews were conducted in two categories. The first category comprised interviews conducted to responsible agricultural management officers in the districts

where the selected organic farming schemes operate. In this category, two District Agriculture, Irrigation and Cooperatives Officers (DAICOs) from the two districts of Siha and Morogoro were interviewed. The interviews focused on gathering data concerning participation of smallholder farmers in organic farming in the identified schemes and in the entire area.

The second category of in-depth interviews involved three officers, who were accessed from each of the selected organic farming schemes. In-depth interviews in this category aimed at gathering data that were used to supplement the data collected from organic farmer groups. The data were used in providing information on the role of cooperation and social networks in fostering smallholder organic farmers' access organic products' markets and their impacts on livelihoods. To sum up, a total of five in-depth interviews with district officers and schemes managers were administered in the study area.

Moreover, the study used FGDs that were administered to randomly selected smallholder organic farmer groups in the respective organic farming schemes. Out of the three purposively selected cases of organic farming schemes, a total of 13 smallholder organic farmer groups were involved in FGDs. Among them, two were from the Africado Scheme, five from the Vanilla Scheme and six from the SAT Scheme. Each FGD included an average of eight smallholder organic farmers who are members of organic farming group in the schemes. The discussion members were randomly selected to represent other smallholder organic farmer groups which are actors in organic farming in the study area. On average, the conducted discussions run for about two hours each. In both in-depth interviews and FGDs, unstructured open-ended guide questions were administered to probe views and opinions from the intended respondents. Nevertheless, some observations on some smallholder organic products markets settings were also made.

In order to make sure that all the intended data are captured from respondents, consented voice recording by using a voice recorder, and taking photographs were done during the in-depth interviews, FGDs and farm visits. Later on, the audio records were transcribed and translated for further analysis. The methodological aspects that were involved in the entire study as previously explained are summarized in Table 4.1.

Table 4. 1. Summarized methodological aspects that were used in the study

Research design	Case selection method	Data collection techniques	Target respondents	Number of respondents
Qualitative	Purposive	In-depth interviews	District Agricultural Management Officers	Two District Agricultural Officers from the two districts in which schemes operate
			Scheme Management Officers	A total of three officers, each scheme is represented by one officer
		Focus Group Discussions (FGDs)	Selected smallholder organic farmers from groups in schemes	Average of one hundred and four farmers, eight from each of the thirteen selected groups from the schemes

Source: Researcher's construct.

4.8 Research ethical considerations

Before embarking on any research endeavor one of the important aspects to take into consideration is the research ethical issues that are likely to crop up in the course of undertaking research. These aspects need to be thought through and considered before the research is undertaken. This study considered all ethical issues in its various stages of implementation as explained.

4.8.1 During research proposal approval

Guidance on ethical issues to be considered by researchers is usually stipulated within codes of professional conduct provided by professional associations for researchers. As contended, ethical issues need to be considered in various phases of the research process (Tracy, 2013; Creswell, 2014; Creswell & Poth, 2018). This study took care of all the required ethical considerations by first submitting the research proposal to the Faculty Committee of the Faculty of Computing Sciences, Business Administration, Economics and Law of Carl von Ossietzky Universität, Oldenburg to seek approval at this level. After approval of the research proposal by the Faculty Committee, applications to seek ethical clearance were made to the Commission for Research Impact Assessment and Ethics of the University. This was done by submitting the required documents which included the research proposal, a summary of the research project, the research interview and focus group discussions guide questions. The other included documents are a

summary of project descriptions to respondents, forms for respondents' declaration and revocation of consent. The latter two have indications of signing for the consent to assure the participants' rights are protected during the process. The Commission approved and issued the research ethical clearance after being satisfied with the contents and processes under which the proposed research was planned to be undertaken.

4.8.2 During the research fieldwork

At the field level, consideration of ethical issues was also taken care of by the research. In the study area, approval to gain access to the schemes, to case studies and respective participants to the study were sought from the national and respective regional and district authorities. As it is mandated, the Open University of Tanzania where the researcher works issued the permit on behalf the National Commission for Science and Technology (COSTEC) for the research to be undertaken in Tanzania. At the regional levels, the respective Regional Administrative Secretaries (RASs) of Kilimanjaro and Morogoro Regions issued permissions for the research to be undertaken in the regions. Thereafter, permissions to seek approval of research undertakings to be done in Siha, Morogoro and Mvomero Districts were sought from and granted by the respective District Administrative Secretaries (DASs). With the approval of the research undertaking by the RASs, permission to access respondents to the cases was sought from the authorities of the organic farming schemes. As Creswell and Poth, (2018) explain, access to cultural groups starts with a "gatekeeper" an individual who is a member of or has insider status with a cultural group (Creswell & Poth, 2018: 156). In the similar situation, it was not possible to access the organic farmer groups without the consent and assistance from the umbrella organizations, the "gatekeeper", which in this sense are the schemes' authorities. All arrangements to organize and visit organic farmer groups in the schemes were verified and made by the schemes' authorities. Respective officers from the schemes were assigned to assist in conducting each activity.

In the course of administering in-depth interviews and FGDs, research ethics were considered to make sure that all participants voluntarily agreed to participate in the research process. Elaborations on the nature and purpose of the study and the role these participants had to play in the research were made by the researcher as the literature explains (Yin, 2016). To show their consent in the research, all participants who were approached for interviews and discussions voluntarily signed the consent form to participate. Moreover, participants were assured of confidentiality not only of their identities which was done by using anonymous identification

during interviews and discussions, but also on the information they provided. Assurance was also made to participants that the gathered information is meant to be used for the intended study and not otherwise.

4.8.3 During data management and analysis

Considerations of research ethical issues was taken on board even after data were collected and during analysis. This was done by safely storing audio records and handwritten notes, assuring the use of data only for the purpose of the study. Data transcripts were carefully handled by the researcher. The data transcripts that were uploaded in MAXQDA Software for processing and analysis were protected in accordance with data use and protection procedures of Carl von Ossietzky Universität, Oldenburg. These data are guaranteed to be written-off from the systems right after the stipulated period subsequent to the completion of the study.

4.9 Data management, analysis and interpretation of findings

The collected data passed through various processes towards getting the intended information and meanings and hence answering the research questions. Within specific phases of implementation, these processes are explained as follows.

4.9.1 Data handling, transcription and translation

Data analysis partially started during the data collection phase by cross-checking on the adequacy of the collected data. This was done by reading through the written notes, listening to recorded audios and taking note of the important topics relevant for the study. After the completion of data, the analysis started by creating a database (Yin, 2016) of the collected data. The process involved a systematic organization of the collected data in files for better management. The researcher transcribed the audios of recorded interviews and focus group discussions from audio format to text formats.

While doing transcriptions, the researcher simultaneously made translations of interviews and discussions from Kiswahili Language to English Language for the appropriate further use in analysis procedures. The transcribed and translated data were then arranged and compiled in electronic files. These data were ready to be uploaded into MAXQDA, a computer based qualitative data analysis software that aids the organization, sorting and processing of data to get relevant information that answers the questions that are intended by any study.

4.9.2 Data codification, categorization and creation of themes through MAXQDA

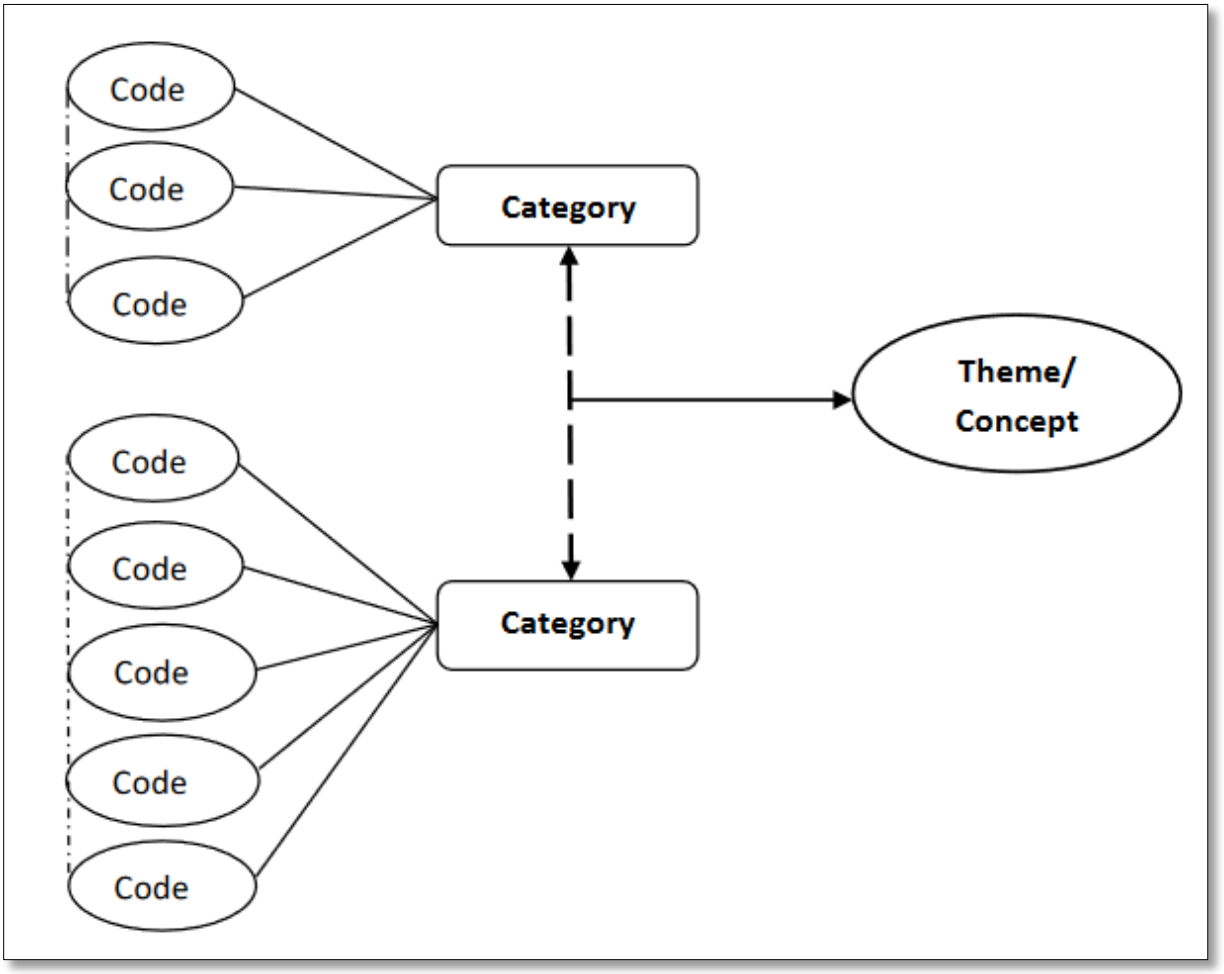
The analysis involved inductively segmenting into codes and later reassembling data into meaningful patterns. Segmentation involved breaking the data into manageable units, synthesizing and codifying them (Merriam & Tisdell, 2016; Boeije, 2010). Based on criteria for similarities and differences, the coded segments from the data set were assigned into categories, that means grouping of codes which go together under the same category. The process was repeated for all data sets of the study. In the similar manner, the developed categories that reflected to have similar characteristics were grouped into themes. The created themes formed the basis for interpretations of meanings that the study sought to understand (Saldana, 2013; Boeije, 2010).

The process of coding, categorizing and derivation of themes from the data was guided by the streamlined codes-to-themes model (Saldana, 2013:13). The model was deployed for the analysis of the specific themes carried out in the specific research questions asked in each of the three organic farming schemes. Later, a cross-case analysis from the findings in each scheme was conducted to depict the themes of high concern across the three schemes. The replication of the adopted and slightly modified code-category-theme model is presented in Figure 4.1.

4.9.3 Data analysis

The qualitative case design of this study led to the selection of qualitative approaches to data analysis. As Flick, (2014) contends, one of the approaches used in analyzing qualitative data is the application of themes that allows reduction of big sets of data by grouping several elements under one concept or theme for easy manageability of the data. This study therefore applied the Thematic Analysis (TA) approach to analyze the data gathered from in-depth interviews and FGDs from case studies. The TA method was used to analyze and interpret meanings from the contents of the inquired themes and opinions, to draw realistic conclusions (Bengtsson, 2016; Vitouladiti, 2014; Krippendorff, 2004). The analysis was aided by MAXQDA. Findings from the conducted analysis were then presented in explanations, descriptions, tables, figures and models.

Figure 4. 1 A streamlined codes-to-themes model for qualitative inquiry



Source: Adapted with modifications from Saldana (2013).

4.9.4 Interpretation and presentation of findings

Having conducted the analysis, findings from each of the three studied cases were derived observing similarities and differences in the results among them. Since the study involved two social capital attributes of internal cooperation and social networks in determining smallholder farmers' market participation, the analysis and presentation of research findings was first conducted on internal cooperation for each of the three cases, followed by the analysis and presentation of findings for social networks for each of the three cases. Thereafter, cross-case assessments of the findings across the three schemes were conducted for the purpose of addressing the research questions for the study.

An interpretation of the research findings was then conducted, showcasing how these findings tally with the contentions of the Social Capital Theory and the Sustainable Livelihoods Framework, the two theoretical concepts used in guiding this study. The interpretation of the research findings for this study further contributed to the body of knowledge by revealing issues revolving around smallholder organic farming and market participation practices that need policy interventions. The interpretation further revealed more research areas that need further investigations. The data management processes, analysis and interpretation of results are summarized and presented in a model in Figure 4.2.

4.10 Validity and reliability

Validity and reliability of a qualitative research can be explained from different viewpoints depending on the orientation of the perceived meaning of the two aspects. Lincolin and Guba, (1985) view validity and reliability of a qualitative research from philosophical assumptions underlying the paradigm. Lincolin et al., (2011) perceive validity and reliability of qualitative research on the methodological approach that is used, and the related outcomes. Guba and Lincolin, (1981) see validity and reliability of a qualitative research on the criteria of credibility, transferability, dependability and conformability. Moreover, Tracy, (2013) in Merriam and Tisdell, (2016) suggests that for a qualitative study to be valid and reliable it should possess criteria such as topic worthiness, transparency of the methods, its significant contribution, ethical considerations and its meaningful interconnection to literature, research questions, findings and interpretations. Creswell, (2014) comments on validating a qualitative research study based on the accuracy of the findings from the researcher's standpoint. The author further suggests the use of multiple approaches such as triangulation of data sources, use of member checks to determine the quality of qualitative findings, use of rich and thick descriptions of the findings and clarification of researcher's bias to explain validity in qualitative research.

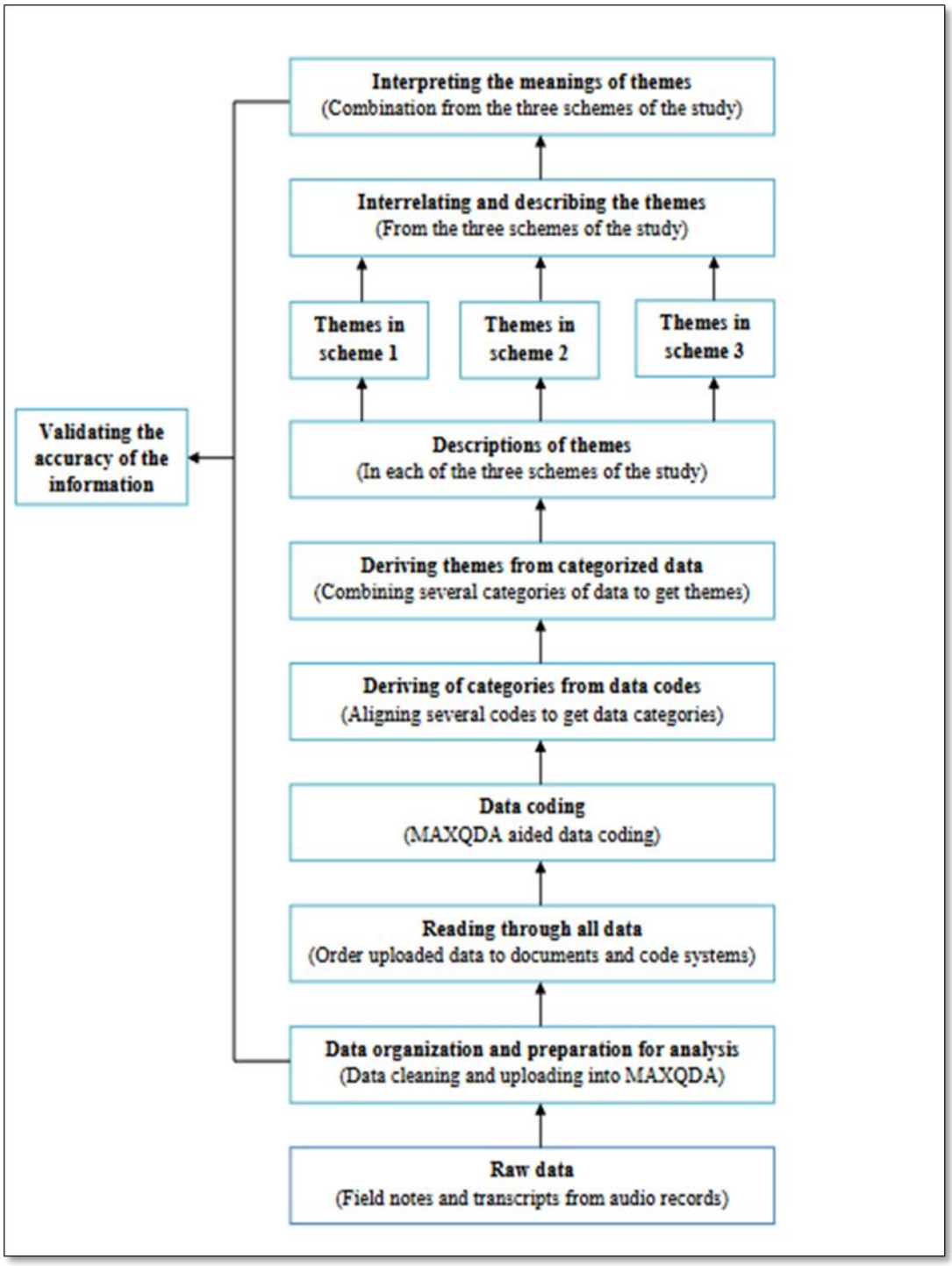
Based on these literature standpoints, validity of this research study is first reflected through the adherence to ethical considerations that were required in the entire research undertaking as explained in Section 4.8 of this chapter. The validity of this research is also explained through the transparency of the applied methodological approach. Being qualitative, the study explicitly adopted qualitative research methods from data collection, in conducting the analysis to the presentation and interpretation of findings. The validity of this research was further indicated through the pre-testing of research instruments prior data collection. On the other hand, reliability

was adopted through the member check approach in which first, the research instruments were presented to various field experts including the supervisor for the approval before data collection. Second, during the fieldwork, the researcher in collaboration with the District Agricultural Officers and managers in every scheme went through to check on the reliability of the research instruments before being administered to smallholder organic farmer groups. Moreover, during the entire process of data management, analysis to interpretation of results, reliability checks were conducted through checking the transcripts, precise definitions of codes and writing memos to ensure consistency. Observation of any mistakes which might have been raised during transcriptions and continuous check on the processes as to whether they all align to the required methods was also done (Creswell, 2014).

4.11 Methodological limitations

As Creswell, (2014) contends, the methodological limitations of a study depend on the data collection methods used. The methods used for data collection in this study, the in-depth interviews to key informants and FGDs to smallholder organic farmers likely provided space for biases in responses from the respondents. For example, some respondents during the FGDs would not explicitly explain some contentious issues for fear of destroying their relationship with other actors, particularly their enablers in the organic production value chain. Moreover, challenges emerged in getting a large number of formal organic farmer groups in some schemes such as the Africado Scheme. This situation limited the wider coverage of representative groups under the scheme. Despite making visits to many groups in the scheme, the number of formal groups that operate organic farming under the scheme and whose data qualified for inclusion in the study were few. Despite this situation, the representing groups provided enough data from which the contribution of the scheme in influencing smallholder market participation could be observed.

Figure 4. 2 The data management and analysis process adopted in the study



Source: Adapted with slight modifications from Creswell, (2014).

4.12 Chapter summary

The chapter has outlined the detailed methodological process involved in the study. A qualitative research approach has been explained following the nature of the study context. The chapter went on describing various research paradigms showing why the choice of the interpretivism philosophical approach was considered to be suitable for this study. The chapter then explained the research design in which a case study method is selected. The scope of the study and the data sources and data types and data collection procedures have also been explained. The in-depth interviews and focus group discussions are presented as the tools that the study used in collecting data. Moreover, the ethical considerations which were considered during research proposal approval, during fieldwork and during data processing, analysis and presentation of research results have been discussed. The chapter also presented the procedures which were involved during data management, data analysis and arriving at the interpretation of research results. The chapter further explained validity and reliability, and ended with the methodological limitations that were encountered in the process and a summary of the chapter. The next chapter presents the study area, smallholders' demographic and socio-economic characteristics, and details on the selected organic farming schemes of the study.

5 CHAPTER FIVE: THE STUDY AREA, SMALLHOLDERS' DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS, AND SELECTED ORGANIC FARMING SCHEMES

5.1 Introduction

This chapter presents general details on the study area, smallholders' demographic and socio-economic characteristics, and the organic farming schemes defined by the study. The chapter begins by providing short descriptions of the location aspects, the demography and the economic characteristics of the country in which the study was conducted. The chapter focuses on agriculture as the economic sector that this study explores. An understanding of organic farming practices, marketing opportunities for organic products and their contribution to the economy in Tanzania are also explained. The chapter outlines the location, demography, climatic conditions and economic activities of the regions in which the cases for conducting the study were selected. The chapter also details the demographic and socio-economic characteristics of smallholder farmers from their organic farming schemes. These characteristics provide an overview of smallholder organic farmers' demography, social and economic status and livelihoods, tailored to the organic farming practices which these farmers undertake. Moreover, clarifying the criteria that were set for the selection of the cases, the chapter explains in detail the three selected smallholder organic farming schemes. The chapter later provides a conclusion on the covered themes ending with a summary.

5.2 About Tanzania: Location, climate, demography and economic characteristics

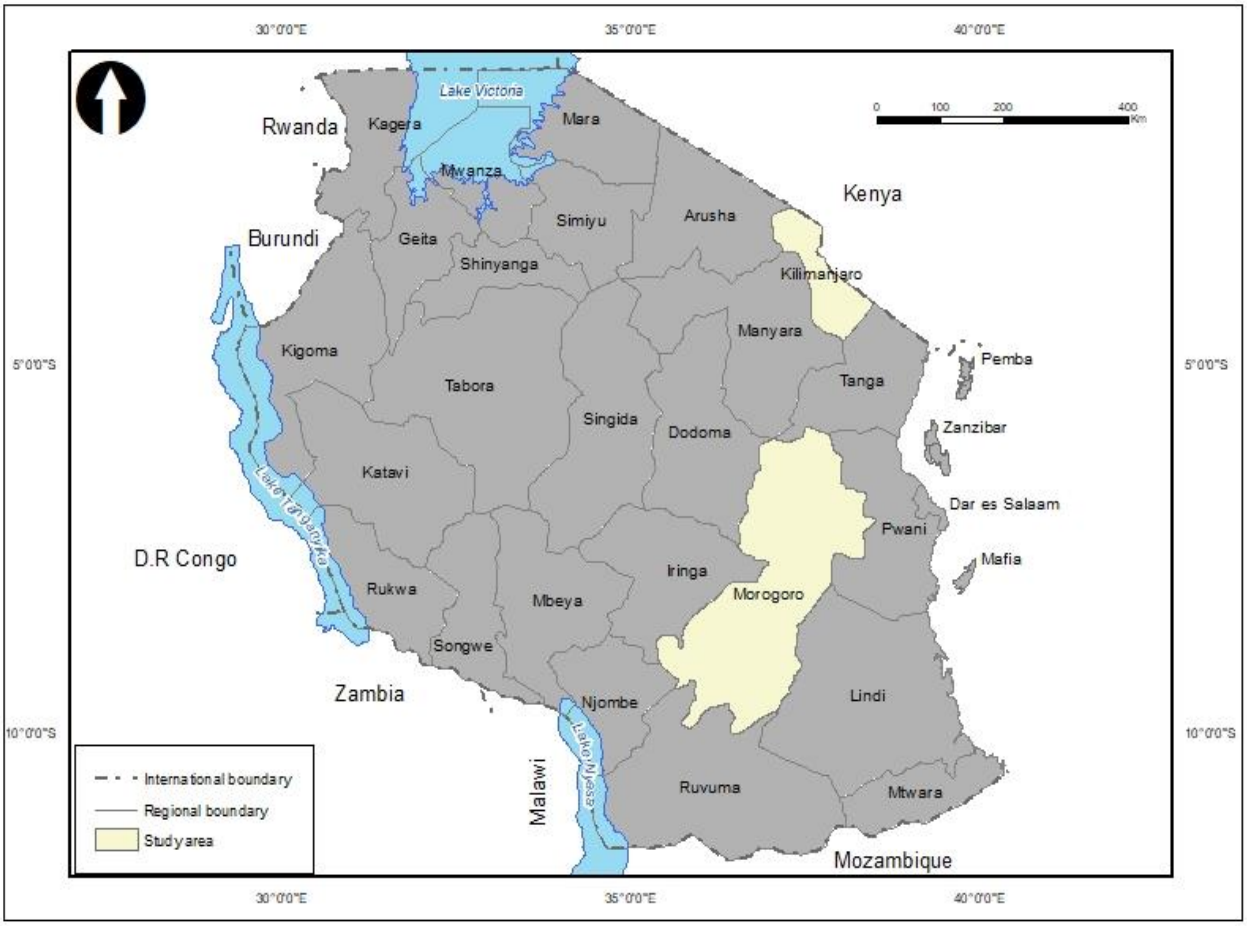
To develop a clear picture of Tanzania, the country in which this study was carried, brief explanations of various characteristics of the country are given.

5.2.1 Location aspects

Tanzania, a country formally referred to as the United Republic of Tanzania is regionally located in East Africa. It lies between latitudes 1^{o} S and 12^{o} S and between 29^{o} E and 41^{o} E with an approximate total area of 944.5 square kilometers with 884.0 square kilometers of land area and about 61.5 square kilometers of inland water (URT, 2021: 2). The country is bordered by several neighboring countries: Uganda in the North and Kenya in the Northeast. To the East, the country is bordered by Comoro islands and the Indian Ocean while Mozambique and Malawi border it on the South and Zambia on the Southwest. Rwanda, Burundi, and the Democratic Republic of Congo border Tanzania on the West (URT, 2021: 2).

The country is administratively divided into 30 regions, 25 regions delineating Tanzania Mainland and 5 regions found in Zanzibar, the group of islands off the eastern coast of Tanzania Mainland. Figure 5.1 is a map of Tanzania, which shows the geographical location, international boundaries and the study regions.

Figure 5. 1 Map of Tanzania showing international boundaries and the location of Kilimanjaro and Morogoro regions



5.2.2 Climatic conditions

Tanzania belongs to the tropical climatic region. Except for a narrow coastal strip, the bigger part of the land is occupied by the East African highlands. While the coastal regions are warm and humid, the highland areas experience temperate conditions with two typologies of rain patterns. The Northern and Eastern parts of the country experience short rain seasons between October and December and long rains season between March and May. One wet season is experienced in the Southern, Central and Western parts of the country with rain experienced between October and May. The Central Plateaus, however, tends to be dry and arid throughout the year.

Tanzania is well endowed with natural resources ranging from dense forests, vegetation covers, valleys, wildlife and game reserves. There are high mountains including the highest mountain in Africa Mount Kilimanjaro; major water bodies including Lakes Victoria, Tanganyika, Nyasa, Rukwa and Eyasi; rivers and river basins, and the Indian Ocean (URT, 2021a). The country is also endowed with various deposits of precious minerals, gemstones and natural gas, and a vast arable land suitable for agricultural activities. These resources contribute to the creation of the Tanzanian economy by attracting activities like mining, agriculture and fishery. Some of these resources are being used for recreation and tourism attractions. It is through the harnessing of these resources that the working population sustains their livelihoods (URT, 2021a).

5.2.3 Demographic and economic characteristics

One of the characteristics that explain the economy of a country is its population. According to the 2022 Population and Housing Census (PHC), Tanzania has a population of 61,741,120 people with an annual population growth rate of 3.2 % (URT, 2022a: 1-2). The report also indicates a slight difference in the gender distribution of this population whereby there are more females than males with the sex ratio of 95 males to every 100 females (URT, 2022a: 12). Of the total population, 53.4% covers the working age population categorized between the ages of 15 and 64 years (URT, 2022b: 26). Regarding the places of residence, the Tanzanian population is predominantly rural whereby 65.1% of the population live in rural areas and 34.9% live in urban areas (URT, 2022b: 37).

The Tanzanian economy is supported by various economic sectors including tourism, mining, construction, manufacturing and agriculture. According to the data provided by the National Bureau of Statistics (NBS) in the National Accounts of Tanzanian Mainland 2013-2019 report, at current market prices, Services Sector is observed to contribute the highest share 40% of GDP, followed by Industry and Construction Sectors 31.1%. On the other hand, Agriculture, Forestry and Fishing show the lowest contribution to the national GDP at only 28.9% (URT, 2021b). Despite its low GDP contribution, agriculture is one of the prominent labor-intensive sectors absorbing about 73% of the predominantly rural population (URT, 2021b). Among other economic activities, agriculture is the main occupation that absorbs most (62%) of the working population which mainly engages in commercial agriculture and food crops (URT, 2021b).

5.3 Kilimanjaro Region

Kilimanjaro Region is one of the regions in Tanzania included in this study of smallholder organic farming activities. In this region, specific cases of schemes with smallholder organic farming activities were found and selected for the study. To provide a picture of the characteristics of this region, explanations of various characteristics are made as follows.

5.3.1 Location, demography, climate and economic activities

Kilimanjaro Region is in the Northeastern part of Tanzania mainland 2^0 25' and 4^0 15' South, 36^0 25' 30" and 38^0 10'45" East (URT, 2018: 5). The region has an area of 13,209 square kilometers out of which 49% of the total land is arable land (URT, 2018: 5). The Population and Housing Census (PHC) conducted in 2022 indicates Kilimanjaro Region to have a total population of 1, 861,934 out of which 51% are females and 49% are males (URT, 2022a:42). The data revealed the region to have the highest elderly population proportion of 7.3% compared to other regions (URT, 2022b: 25). Administratively, the region has six Districts and seven Local Government Authorities which are Moshi, Rombo, Same, Mwanga, Hai and Siha District Councils and Moshi Municipal Council (URT, 2022a, URT, 2018).

The economic base of this region is formed by various activities which include agriculture, mining, industrial activities, tourism, and commercial activities. Kilimanjaro is one of the regions that have the potential for the production and exportation of horticultural products. The region is gifted with conducive geographical and climatic conditions, good soils and plenty of water sources that facilitate the growth of various crops (URT, 2018). Such crops include coffee, flowers, vegetables, cuttings and horticultural seeds. The conducive climatic environment and good soils facilitate organic farming practices as well. Crops like coffee, beans, banana, vegetables, fruit trees, vanilla and jatropha, are commonly organically produced in the region. The term Ecological Organic Agriculture (EOA) technology is commonly used, especially by the African Union, to refer to organic farming and agro-ecological approaches (Ozor & Amudavi 2021; Auerbach & Purkis, 2020; Bakengesa & Uisso, 2015). Exportation of produce like flowers, cuttings and fresh vegetables to the United States, Europe, Arabia, Asia and some African countries is well facilitated by the fresh produce handling facilities at the Kilimanjaro International Airport.

5.3.2 Siha District

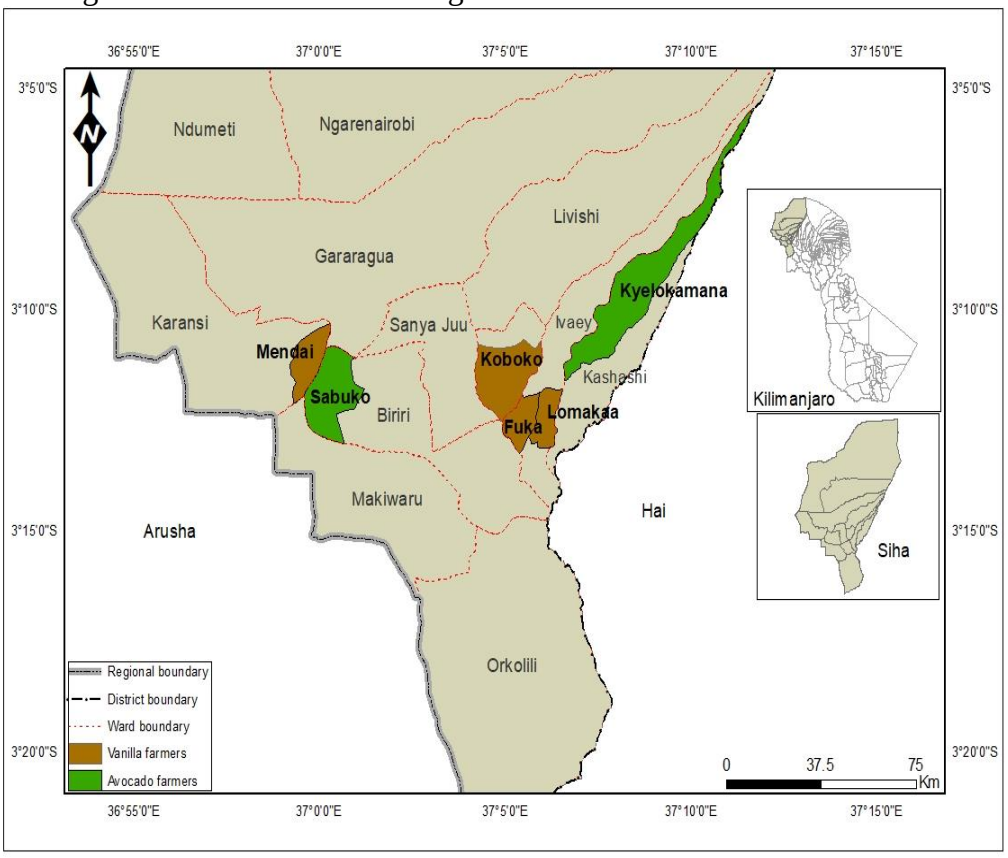
Siha is one of the districts that compose the Kilimanjaro Region. Within the region, Siha District was identified to have suitable cases of organic farming schemes that were selected for the study. Situated in the Southwest of Mount Kilimanjaro, the district lies between Longitude 37.3" and 37.17" East, and between Latitude 2.5" and 3.00" South. The district has a total area of 1158 square kilometers. (http://www.sihadc.go.tz/district-profile, 2020). Siha District experiences various agro-climatic conditions that lead to the formation of three agro-economic zones within the district. These zones are the Highland Belt which lies between 1200-1400m above mean sea level (amsl) with rainfall ranging between 800 and 1200mm. The zone is suitable for agro-forestry and temperate crops like coffee, banana, maize, Irish potatoes, vegetables, fruits, wheat, barley and sunflower (UNDP, 2014). Another zone is the Central Belt which lies between 900 and 1000m (amsl) and receives rainfall between 600-900mm. The Lower Belt lies between 700 and 960m (amsl), and receives annual rainfall between 400-600mm that supports the cultivation of crops such as beans, banana, sweet potatoes, finger millet, pigeon peas, cassava and vegetables (UNDP, 2014). Apart from the mentioned crops, the area is observed to be suitable for the cultivation of crops like avocado and vanilla which have been recently indicated to thrive suitably in the belt. The crops are cultivated for commercial purposes capturing domestic and international markets thus forming an economic base for many smallholder farmers in the region.

5.3.3 Organic farming in Siha District

Organic farming activities in Siha District are mainly conducted by smallholder farmers and three main crops are cultivated organically. These crops are avocado trees, vanilla and bananas. A demand for the shift towards the cultivation of avocado and vanilla came in recent years after a worldwide price fluctuation and a decline in world market demand for coffee, the traditional cash crop extensively produced in this area. Organic farming practices in the district are undertaken collaboratively by uniting smallholder farmers. Due to the lack of sufficient technical capacity and financial resources to produce and market organic products at individual levels, farmers organize themselves into groups for the management of farming activities. Organizing and working in groups allows smallholder farmers to have interconnected networks that accelerate the flow of information necessary for managing organic farming activities and market access. Moreover, smallholder farmers in the district cooperate to mobilize other capital assets including but not limited to access to financial resources.

In order to build and improve smallholder farmers' capacity for organic farming, commercial farming initiatives like NGOs and independent companies work with smallholder organic farmer groups as out-growers. The scope of the capacity building between these entities and smallholder farmers is mainly on providing training on farming methods, enhancing large and quality production, and market provision and facilitation. Various smallholder organic farming schemes that involve smallholder farmers in Siha District include the Africado, an avocado producing company that works with more than 2000 small-scale out growers. Others include the organization of Organic Vanilla Farmers which mainly involves smallholder organic vanilla farmers, who work in collaboration with two development stakeholders. These are the community-based vanilla farmers union known as Umoja wa Wakulima wa Vanilla Kilimanjaro (UWAVAKI) and a private company known as Natural Extract Industries Company (NEI). These community-based and private investments attract a large base of organic farmers in the district. The geographical locations of Siha District in Kilimanjaro Region and the selected villages in Siha District where organic farming activities are undertaken are shown in Figure 5.2.

Figure 5. 2 A map showing the locations Siha District in Kilimanjaro Region and the selected villages in Siha District where organic avocados and vanilla are cultivated



5.4 Morogoro Region

Morogoro is the other region that was selected for this study. The region provided bases of organic farming schemes that include smallholder farmers who were targets of this study. General information on some characteristics of the region is briefly given below.

5.4.1 Location, demography, climate and economic activities

Morogoro region is among 20 regions in Tanzania mainland located in the Mid-Eastern part of Tanzania mainland. The region lies between latitude 5^0 58" and 10^0 00" South of the Equator and longitude $35^0$25" and $38^0$30" East of Greenwich (URT, 2020). The region is bordered by Arusha, Manyara and Tanga regions to the North and the Coast Region to the East. To the West, the region is bordered by Iringa, Njombe and Dodoma regions while in its South, the neighboring regions are Ruvuma and Lindi. The region has a total area of 73,039 square kilometers out of which 70,967 square kilometers is land area and 2,073 square kilometers are covered by water (URT, 2020). Administratively, Morogoro is divided into 6 districts namely Gairo, Kilombero, Kilosa, Morogoro Municipality, Morogoro Rural, Mvomero, and Ulanga. The region experiences an average temperature of 24^0 C, with a minimum mean of 18^0 C in the mountainous areas and a maximum mean of 30^0 C observed in the lowland areas. The region experiences two typologies of seasons; the wet and dry seasons. The rainy seasons are usually from November to May, while dry seasons take place between June and October. Rainfall varies between 500mm in the lowlands and 2200mm in the mountainous areas.

According to the Tanzania 2022 Population and Housing Census (PHC), Morogoro Region has a population composition of 3,197,104 with a distribution of 50.6% being females and 49.4% men (URT, 2022a: 64). The region is largely occupied by a rural population of 60.9% while 39.1% of its total population dwells in urban areas (URT, 2022b: 7). The working population in Morogoro is mainly occupied in various social economic activities falling under the following categories: administrators, professionals, technicians, farmers, small businesses, street vendors, shopkeepers, livestock keepers and fishermen (URT, 2020). Commercial agriculture provides a larger employment share to the working population compared to other fields of activities and its contribution to the economy of the region is significant. For example, the sector contributed to 67.7% of the Regional GDP in 2019 (URT, 2020: 39).

5.4.2 Organic farming activities in Mvomero and Morogoro districts

As part of the focus of the study in the region, experiences from Mvomero, Morogoro Urban and Morogoro Rural Districts show the undertaking of organic farming practices. Organic farming in these areas is largely undertaken by smallholder farmers. However, the execution of practices is usually done by smallholder farmers in collaboration with organic farming initiatives, schemes, organizations and institutes. These include NGOs, agricultural institutes like Sokoine University of Agriculture (SUA) and other development initiatives like SAT. Organic farming activities in the districts are mainly for production of horticultural products and spices.

Despite the adoption of smallholder organic farming practices, the marketing for organic products is still not well developed. The sector faces challenges ranging from poor production, insufficient and unreliable supply of organic inputs, lack of capacity for value addition to the products, lack of certification and lack of proper retail outlets. Moreover, proper marketing strategies have not been adopted for the sustenance of organic products markets at least to serve the increasing consumer demand for organic products in urban areas (Valerian et al., 2011). As mentioned, one of the initiatives that facilitate smallholder organic farming activities in the region is SAT. This initiative attracts most of the farmer groups that embark on organic vegetables and spice farming. It collaborates with smallholder farmer groups from Masimbu, Mgeta, Kiroka, Kibuko, Mfumbwe and Kibwaya villages among others in the districts. The geographical locations of the case study districts in the region and the villages in which smallholder farmer groups selected for the study are shown in figures 5.3 and 5.4.

Figure 5. 3 Map showing the location of Morogoro Rural District in Morogoro Region and the villages where smallholder farmer groups were selected for the study

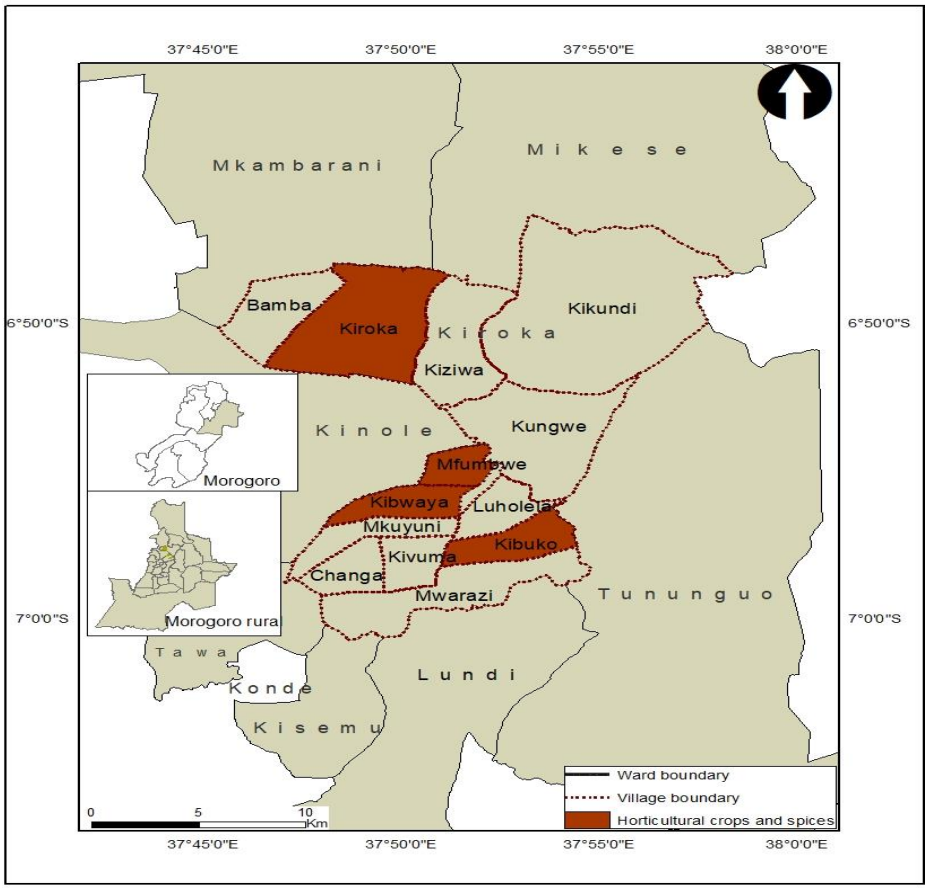
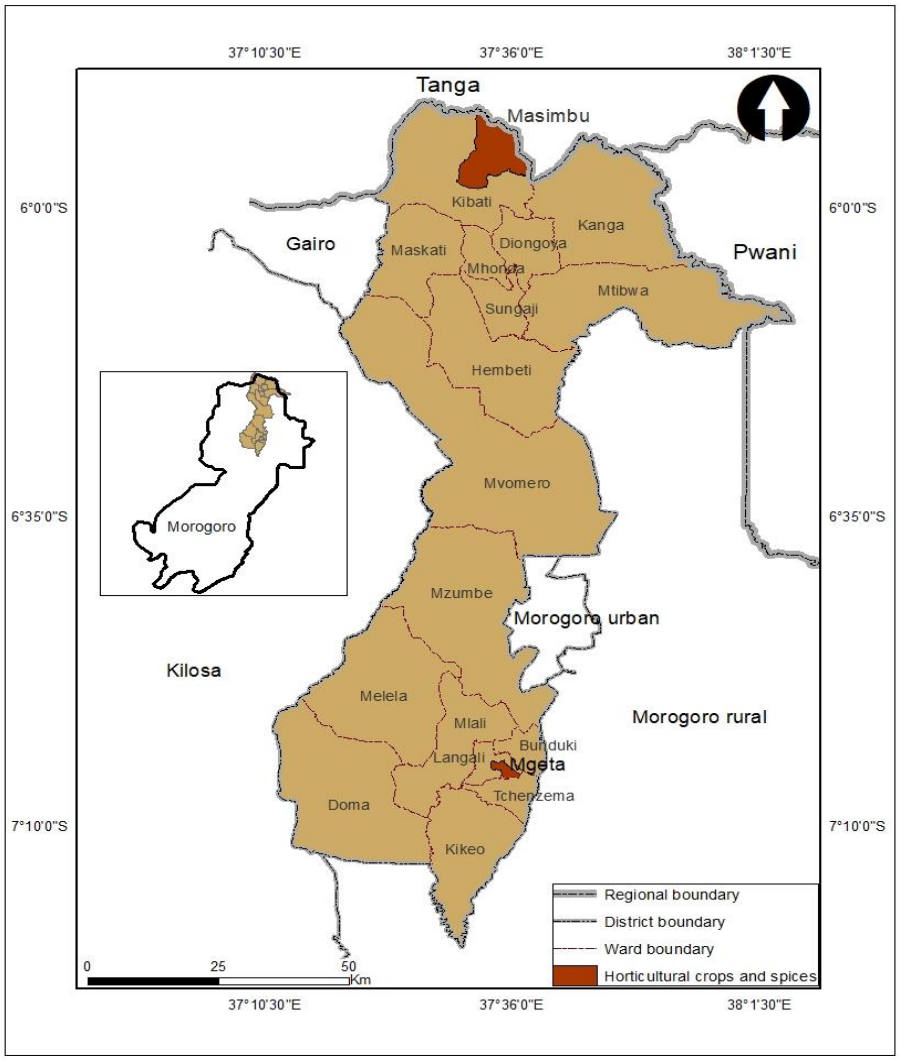


Figure 5. 4 Map showing the location of Mvomero District in Morogoro Region and the villages where smallholder farmer groups were selected for the study



5.5 Demographic characteristics of smallholder organic farmers in the study area

When undertaking a research study, some demographic characteristics such as age, gender, ethnicity, religion, marital status and family size to mention a few need to be understood. Demographic information provides data regarding the status of research participants. This information is necessary for the determination of whether individuals in a particular study form a representative section of the target population for generalization purposes (Salkind, 2010). More than generalization purposes, demographic characteristics are reviewed to explain the suitability of the target population in terms of the specific characteristics as targeted by any study. The nature of this study leads to gathering and analyzing data on the age and gender as demographic

characteristics of the target population in smallholder farmer groups in the schemes. This information captured the characteristics from smallholder farmers in two regions of the study.

5.5.1 Age

Age is one of the demographic components that is studied to understand the age distribution of most participating farmers in organic farming activities in selected cases. This demographic aspect is analyzed based on specified age categories that were studied from the organic farmer groups in the three schemes. The age categories include youths, middle age, elderly and mixed ages. The study noticed organic farmer groups comprise members falling under different age groups. Many organic farmer groups in the schemes, however, encompass more elderly people compared to other age groups. The youths age group has been found to have the least representation of farmers participating in organic farming activities in the study area.

Among the factors that lead to a higher representation of elders and the least representation of youths in organic farming, are the factors associated with land ownership. The current land ownership mechanism of inheriting land from parents provides more land holding to the elderly compared to the youths. Despite the desire by youths to engage in organic farming, they are hindered by limitations to accessing land as they cannot own land until they inherit it from their parents. Another prevailing scenario for low representation of youths in farming activities is observed to be caused by the lack of tolerance. Farmers explained that youths are not ready to engage in economic activities that require a long waiting time before attaining returns. Youths are impatient in engaging in agricultural activities, particularly organic farming. The timeframe that passes for a farmer to wait before realizing profits from the harvests is usually long. Youths usually become more motivated to engage in what they consider as fast income generating activities. Such are usually petty and informal activities like driving motorbikes known as *"bodaboda"* as a private means of hired transport. In this regard, farming activities become vested in the hands of the elderly. Among the selected cases, such scenarios prevail mostly in Siha District cases.

5.5.2 Gender

Gender is another demographic characteristic that is studied to understand what constitutes the population of farmer groups in the schemes. It is studied to understand if there are any significant roles that are played by the characteristic in influencing the undertaking of smallholder organic farming activities in the schemes. In the context of this study, the gender analysis is expressed in

terms of group compositions which are either composed of more males, more females, or a mixed representation of males and females in groups.

Observations from the selected cases of smallholder organic farmer groups show that both males and females participate in many organic farming activities that are undertaken by groups. Nonetheless, observations from schemes indicate that, in this distribution, there are more females who are in groups compared to men. Further observations indicating the participation of more females is observed in the selected farmer groups under SAT scheme in Morogoro Region. In these cases, there are groups that are typically formed by many female members only. Cultural or traditional factors seem to have a significant role in motivating females to participate in organic farming practices compared to men. Traditionally, in the study area's context, gardening activities are meant to be carried out by women. Men tend to underrate the value obtained in the activity and do not understand the economic significance the endeavor may have. Since a wider scope of organic farming in the study area involves the cultivation of horticultural crops in small garden terraces, men consider this type of cultivation to be only suitable for women. Also, men consider farming activities conducted in groups are meant to be undertaken by women. Furthermore, just like in the age characteristic, a lack of tolerance for long-term crop cultivation also prevails in the gender characteristic. Men do not like to wait for returns from crops that require a long period before the harvests.

5.6 Socio-economic characteristics of smallholder organic farmers in the study area

Another category of characteristics of the population that was included in the study is defined by socio-economic characteristics. The characteristics explain the social and economic qualities and abilities that the population of smallholder farmers in the schemes is endowed with and how these characteristics influence the undertaking of organic farming activities in the area. Socio-economic characteristics describe a combination of economic aspects and social processes applied by a certain group of people in a society. These characteristics may include but are not limited to social and economic statuses, levels of education, economic activities, professions, ethnic background and heritage. This study outlined various characteristics which are explained as follows.

5.6.1 Main livelihood activities of smallholder organic farmers

The rural settings and social-economic attributes of many smallholder farmers explain the nature of livelihoods among these rural dwellers. This means that rural livelihoods can be perceived based on the status quo of these characteristics of the rural population. Ellis, (1998) in Mphande (2016) describes livelihoods as activities, assets and access that jointly determine the living gained by an individual or a household. All activities involved in finding food, water, shelter, clothing and all necessities required for the survival of an individual and household constitute livelihoods (Mphande, 2016).

As regards the context of the study, different socio-economic characteristics have been analyzed to understand the livelihoods of the intended study population. The common livelihoods of smallholder organic farmers in the study area are found to be agriculture and a mixture of agriculture and livestock keeping. Others comprise non-agricultural production activities such as entrepreneurship activities, beekeeping, poultry, investing in shares, and credit lending. Others are informal activities like food vending, brokerage and motor biking as a means of transportation that generate income for the population.

The study further reveals that the most dependable livelihoods for the selected cases are more on the cultivation of organic crops, whereas other non-agricultural activities occupy the second position in providing livelihoods. Smallholder organic farmers however undertake a mixture of both crop cultivation and livestock keeping in smaller magnitudes. Also, smallholder farmers support farming activities by engaging in other economic activities particularly petty trading and business activities undertaken on their living premises.

5.6.2 Formation of smallholder organic farmer groups

The formation of groups among smallholder organic farmers is associated with desires to achieve objectives that may be difficult to achieve individually. Among the reasons for individuals to form groups include the wish to have large land holdings as opposed to small land holdings, network formation, access to extension services, access to credit and access to markets. In this respect, the identified reasons for the formation of smallholder farmer groups include the wish to engage in the cultivation of organic crops, improving smallholder farmers' economic welfare, improving access to product markets, capacity building and creation of unity among smallholder farmers. Other reasons include smallholders' access to credit and access to farm inputs and implements.

Group formation in the selected cases of farmer groups in the study area is mainly prompted by smallholder farmers' desire to engage in the cultivation of organic crops. Through working in groups, smallholder farmers believe that their economic welfare will be improved. Moreover, market access and enhancing capacity building are the contributing factors for group formation among smallholder farmers. However, very few organic farmer groups in the selected cases in the study area are formulated for these purposes. Despite facilitating unity creation among group members, unity creation appeared to be the least reason for farmer group formation in the selected cases in the study area.

5.6.3 Membership criteria in smallholder organic farmer groups

The criteria for smallholder organic farmers to join and be retained in groups has also been taken as one of the socio-economic characteristics in defining the population of this study. Formulation of criteria that are necessary for members to join smallholder farmer groups is observed as one of the means that can facilitate coherence among members within groups. Criteria for group membership are outlined based on aspects that farmers consider to be important for ensuring their group survival and ensuring easy facilitation of day-to-day farming activities. Thus, members wishing to join farmer groups were assessed based on the following criteria.

Farmer groups in the study area are formed with the aim of joining hands to work on organic farming for environmental protection, overcoming challenges associated with the practice, and finding viable markets for organic products. For this matter, doing organic farming is a criterion that provided eligibility for a farmer to join a group. Group members residing in the same locality such as the same village is another criterion that was considered important for group membership. It is assumed that the farmer groups that consisted of members who live within the same location are likely to do well due to easy coordination of their activities. They can quickly associate, organize and conduct meetings promptly. Moreover, by-laws enforce group members to follow the group behavior and therefore adequately fulfill their responsibilities. This criterion provides lawful sanction measures such as disqualifying group membership in case a member acts contrary to the stipulated group rules and regulations (e.g. by using pesticides).

Criteria for group membership varied in significance among groups in the schemes. Many groups considered practicing organic farming as the main membership criterion. This means that, when a farmer wishes to join a group, he or she must prove they engage only in organic farming to enter the group. The group may wish to visit a new member's farm where organic farming is undertaken

as the verification for acceptance in the group. The other factor that some groups considered important next to organic farming practice was mandatory residence in the same village by a new member. However, some groups welcome interested farmers from neighboring villages provided that they follow the group rules and regulations and are ready to fulfill the obligations. Similarly, adherence to group by-laws by group members was another group membership criterion in a few groups that were included in the study. In such groups, stringent measures were posed to be taken against group members who do not abide by by-laws, rules and regulations set by the group. Some other criteria for group membership like payment of membership fees was also mentioned but is the least basic for membership.

5.6.4 Average number of members in smallholder organic farmer groups

The study considered the number of members in a group as one of the socio-economic characteristics in selected groups in the study area. The average number of group members was categorized in ranges between 1 and 30 members, between 31 and 50 members, and above 50 members. In the selected cases in the study area, most smallholder farmer groups were observed to have members in the range between 1 and 30 members followed by groups with members in the range between 31 and 50 members. Very few smallholder organic farmer groups consist of more than 50 members per group. Even though groups indicated the number of members to be between 1 and 30 members, farmers explained that these numbers do not always remain the same. There are variations, rises or drops in numbers depending on the circumstances. The group in the range of between 1 and 30 members experienced more dropouts of members. Dropouts were mainly based on personal reasons but were also associated with factors such as stringent disciplinary actions for group members who do not abide by the stipulated rules and regulations.

In addition to the statuses of these group sizes, there was a higher possibility of rises in the number of group members in categories between 31 to 50 and above 50 members. This rise is noted more in smallholder organic farmer groups that were found in Siha District where farmers are becoming more interested in cultivating trending income-generating organic crops like Vanilla and Avocados. The number of members within groups in the scheme is explained to be an important socio-economic characteristic for this study. Groups with very few members often experienced difficulties with the coordination and management of organic production and marketing activities. Also, access to resources and extension services for them are affected.

5.6.5 Average timeframe of the existence of smallholder organic farmer groups

The duration of the existence of organic farming groups is one of the analyzed socio-economic characteristics. This characteristic is assumed to be one of the determining factors for the strength, unity, cohesion and development of specific groups and their members. Inquiries for determination of the timeframes for farmer groups' existence were classified in ranges between one and five years, between six and ten years, and above ten years.

Observations on the age of smallholder organic farmer groups in the selected cases indicate that many groups have been in existence between one and five years. On the other hand, only a few groups have been in existence for more than five years and a few as well for more than ten years. These details implied that many of the smallholder organic farmer groups in the selected cases were still young and in the early stages of growth.

5.6.6 Modes of land access in smallholder organic farmer groups

The study inquired about the modes of land access as one of the socio-economic characteristics. Three modes of land access have been identified from the selected cases of smallholder organic farmer groups. The land is accessed through inheritance, hiring and buying. With inheritance, farmers access land through the traditional allocation of pieces of land from their parents or fore-parents. With hiring, farmers temporarily borrow pieces of land from other land owners who lease the land for economic gain. With buying, farmers purchase pieces of land from other land owners who permanently sell the pieces of land for economic gain.

The study observed that land access by smallholder organic farmers in the selected cases in the schemes was mainly done through inheritance. A few of the farmers have access to land through hiring whereas the smallest group of farmers purchased land for organic farming. Also, groups indicated that many of the group members who own land through inheritance and purchasing use the lands for the cultivation of long-term crops such as Vanilla, Avocados and spices. Hired land is normally used for short-term crops such as vegetables. The high indication of land access through inheritance in the study area is contributed mainly by the cultural mode of land ownership that is more practiced in Siha's smallholder organic farmer groups. In these groups, cultivation of long terms crops is the main organic farming activity and land is used for that. Cases of land leases were indicated more in groups under SAT Scheme where cultivation of short-term organic vegetables is more common.

5.6.7 Forms of farm/land ownership in smallholder organic farmer groups

This study also assessed the various forms of land ownership that are adopted by smallholder organic farmers in the schemes. The study identified two forms of land ownership. The first form is individual ownership in which farm plots are owned by individual smallholder farmers. The other is group ownership which denotes smallholder farmers own farm plots as a group. The identification revealed variations between the two forms of land ownership among smallholder farmers in the selected cases.

Smallholder organic farmers who have individual ownership of farm plots are many compared to farmers who own farm plots in groups. Farmers who own farms in groups hire or buy land and they cultivate it collectively. The commonly owned plots are known as group farms or Farmer Field Schools (FFS). FFS in many cases were used for demonstration purposes. Smallholder farmers acquired and managed the farm plots through their self-initiatives or in collaboration with the schemes. In FFS and some other communal farms, farmers obtained practical training on organic farming from the schemes. Group land ownership was observed more in the selected cases under the SAT Scheme. It is through working on these commonly owned farm plots that smallholder farmers learned various agro-ecological farming practices like improving soil fertility and improving productivity. The gained knowledge is then replicated in farmers' own farm plots. On the other side, farm ownership on a typical individual basis prevailed more in groups under the Africado Organic Farming and Organic Vanilla Farming schemes in Siha District. In these cases, customary land ownership persisted more where land is traditionally owned through inheritance and organic farming activities are undertaken on individually owned farm plots.

5.6.8 Average sizes of smallholder organic farms

The study also looked at the average farm size cultivated by smallholder organic farmers in selected cases in the study area, regardless of whether the farm is being cultivated individually or in groups. The characteristic classified farm sizes into three categories between 0.25 and 3 acres, between 3 and 5 acres, and above 5 acres. Many smallholder organic farmers responded that they cultivate farms that range between 0.25 and 3 acres. The range of above 5 acres followed in representation among smallholder farmers whereas the range between 3 and 5 acres of average cultivated land had the least representation among smallholder farmers in the selected groups in the schemes.

Although smallholder organic farmers understand the potential economic returns from extensive production of organic products, they still have challenges in cultivating large portions of land from which large quantities of organic produce would be obtained. Smallholder organic farmers also lack the motivation to use the arable land due to challenges that are related to access to financial capital. They cannot sustainably cultivate on a large scale and produce for business purposes. Instead, they tend to stick to cultivating small farms, basically for small commercialization and subsistence.

Nevertheless, farmers have now started to be organized into groups, strategize for securing financial resources and cooperatively find means to secure more land for the cultivation of organic crops. They have now started to understand the importance of cultivating larger portions of land for increasing production and improving economic gain.

From the entire setting of the study ranging from the country to regions and specific districts and explanations of the socio-economic characteristics of smallholder organic farmers in general, this study identified various organic farming activities that are organized under collaborations. These forms of collaborations include smallholder organic farmers and private organic farming, and community-based initiatives and companies are referred to as organic farming schemes by this study. The study found three categories of organic farming schemes in the study area. These are the Organic Vanilla Farming Scheme, the Africado Organic Farming Scheme, and the Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme. Details on what all these schemes deal with are provided in the following parts of the chapter.

5.7 The Organic Vanilla Farming Scheme

The Organic Vanilla Farming Scheme as previously introduced is in Kilimanjaro Region. It is founded on business collaborations between smallholder organic vanilla farmers and vanilla agribusinesses in the region. The scheme is purposely selected as one of the cases of the study due to the fact that it is formed by smallholder organic farmers who are organized in groups. These organized farmers undertake the organic farming activities under this case by the facilitation of an umbrella union together with an agribusiness. This formation consolidates the base of social capital and aids the market participation of smallholder organic farmers. More coverage of this scheme is explained as follows.

5.7.1 Formation and historical background

In the early 2000s, the vanilla crop was introduced in Kilimanjaro Region with the aim of improving food security conditions and strengthening sustainable rural farmers' development (https://www.trcs.or.tz/media/attachments/2021/05/21/vanilla-project-infographic-report.pdf).

The zeal for embracing the cultivation of the crop by smallholder farmers emerged following their needs to increase income levels which were expected to be attained by cultivating on limited portions of land they own. The high price for the crop raised farmers' expectations of gaining huge profits compared to the traditional coffee cash crop which seemed to decrease promises in terms of yields. Losses resulting from coffee production motivated these farmers to go for vanilla production as an alternative to a coffee crop whose market price was also on the decline. With the price of vanilla hitting records high, many of the smallholder farmers in Kilimanjaro just like in other regions in Tanzania and East Africa at large are now forgoing coffee and other cash crops for vanilla. Currently, the price for one kilogram of vanilla is on average 60,000Tshs, compared to coffee which is sold between 3,500 Tshs. to 4,000 Tshs. per kg (https://www.selinawamucii.com/insights/prices/tanzania/).

5.7.2 Scope of operation in the scheme

Vanilla is organically produced by more than 2000 smallholder farmers in Kilimanjaro and has revealed its potential in uplifting the social and economic livelihoods of farmers in the region (https://www.trcs.or.tz/media/attachments/2021/05/21/vanilla-project-infographic-report.pdf). In Siha District, vanilla was identified as one of the crops cultivated by smallholder farmers for commercial purposes. Organic vanilla farming is undertaken by smallholders in collaboration with two development initiatives. The first initiative is the Association of Vanilla Farmers in Kilimanjaro, which in Kiswahili is called Umoja wa Wakulima wa Vanilla Kilimanjaro (UWAVAKI). It is basically a community-based union that incorporates all smallholder organic vanilla farmers in Kilimanjaro Region. The other initiative that collaborates with smallholder farmers in the region is known as Natural Extracts Industries (NEI) Ltd, a social enterprise concerned with the provision of social, economic and environmental solutions in the agricultural sector in the region. The integration of smallholder vanilla farmers and these initiatives creates a farming scheme which for its purpose, this study refers to it as the Organic Vanilla Farming Scheme.

5.7.3 The Association of Vanilla Farmers in Kilimanjaro (UWAVAKI)

The Organic Vanilla Farming Scheme works with the Association of Vanilla Farmers in Kilimanjaro known as Umoja wa Wakulima wa Vanilla Kilimanjaro (UWAVAKI). This is a sub-part of the scheme that represents a union of smallholder vanilla farmers in the region. It was established in the year 2014 with the aim of uniting smallholder organic vanilla farmers to improve vanilla production capacity, improve food security and enhance sustainable rural development. The union encompasses smallholder vanilla farmers from all districts in the region and is open to any vanilla farmer who is interested in selling vanilla produce to domestic or international markets through the union. Smallholder vanilla farmers within the union are empowered to embark on vanilla production activities from cultivation to green pod production and drying process. The union also collaborates with other stakeholders who are interested to support smallholder farmers to increase vanilla production and marketing. An example of such partners is the Red Cross-Tanzania which between 2015 to 2018 embarked on smallholders' capacity building in vanilla production and marketing and helped farmers create networks with vanilla stakeholders. This was done through training and technical support in production, infrastructure and facilities development. Formation of the vanilla farmer field school, creation and registration of farmer groups, the building of vanilla collection centers and learning about vanilla processing techniques and marketing were the results of the collaboration. Facilitation was also in improving organizational management, and transportation capacities of vanilla fruits from farmer plots to the processing center. Organizational and managerial skills in the UWAVAKI union were also enhanced through this partnership.

UWAVAKI empowers smallholder organic vanilla farmers to expand the production capacity to meet a portion of the demand and ultimately improve smallholder farmers' livelihoods. Such includes the creation of an enabling environment for vanilla processing and marketing in domestic and global markets. After vanilla is collected from all farmers, drying processes take place at the collection center. The union then searches for markets, and selling vanilla is done by the smallholders themselves. The union facilitates using social media platforms in search of markets. Moreover, in collaboration with the UWAVAKI union, Red Cross-Tanzania helped smallholders in creating networks with vanilla stakeholders in other countries like Canada. Through the union, farmers are empowered in advertising and in promoting processed vanilla. Figure 5.5. shows some of the collaboration activities that were undertaken by UWAVAKI and Red Cross in Siha District.

Figure 5. 5 The Vanilla Collection Centre constructed by the facilitation of Red Cross for UWAVAKI's vanilla collection

Source: Research field data, (2020)

5.7.4 The Natural Extracts Industries Ltd (NEI)

Another initiative that works with smallholder organic vanilla farmers in the form of a private company is the Natural Extracts Industries Ltd (NEI). This is a social-economic enterprise that was established in the year 2011 for the purpose of upgrading smallholder farmers' livelihoods through the value addition of crops. The enterprise reaches the global market by producing the highest quality ingredients while empowering smallholder farmers to build sustainable livelihoods for the current future generations. The company has so far worked with more than 5000 smallholder farmers in the form of out-growers networks (NEI, 2020). The support extended by NEI Company is principally on educating smallholder farmers on the growing and cultivation of vanilla which is later to be used at the company's factory. NEI Company buys raw organic vanilla produced by contracted smallholder farmer groups in the region.

Apart from providing basic on-farm training, the company builds smallholder farmers' capacity by providing technical training on drying vanilla using solar energy. The enterprise has played a role in boosting trust and cohesion among smallholder farmers. The farmers are organized into

groups and obtain training pertaining to group formation and managing their day-to-day responsibilities. They get training on group governance, savings and nutrition. Within groups, the company identifies dedicated farmers who are then known as “early adopters” or “champions” who are usually the elderly respected members of the community. These farmers, apart from working on their own farms, are assigned tasks to follow up on other farmers’ farms and give advice where required.

The collaboration between NEI and smallholder vanilla farmers aims at creating a market relationship between the two. The company operates an out-grower network of more than 2000 farmers (NEI, 2020). The company is the main customer or buyer of the raw vanilla that is produced by farmers which is later processed for producing vanilla extracts. Farmers contract with the company to sell the unprocessed vanilla (green pods) to the company, whereas the company continues with the later vanilla processing stages to the extraction and exportation.

5.7.5 Operating indicators for organic vanilla markets

Despite being in the early stages of its development in the selected cases in the study area, the market potential for the vanilla crop exists. The world’s finest quality vanilla taste which is obtained from farm and being processed to flavors is largely marketed through the collaboration of smallholder farmer groups and enabling companies like NEI. Vanilla flavors from Kilimanjaro are sold to the United States and Western Europe and some to Japan and South Africa and in a small amount to the islands of Mauritius and Seychelles. The current retail market price for Tanzania vanilla is between USD 15 and USD 30 per kg, which means the retail price in Tanzania Shillings ranges between 35,714TZS and 71,429 Tshs. per kg (https://www.selinawamucii.com/insights/prices/tanzania/vanilla/).

According to NEI, the Organic Vanilla Farming Scheme is currently harvesting about 30 tons of green vanilla pods per year which can produce only about five tons of black pods (NEI, 2020). However, the international market demand for black pods per year as of June 2019 was 4000 tons while the supply was only 1800 tons (Mafie, 2020:88). With such high market demand for vanilla, the potential for increased production and supply and improved livelihoods among smallholder vanilla farmers are very high. Farmers’ household income levels are expected to rise tremendously from an average net income of USD 391 to 12,022 per year (Mafie, 2020:89). This depends on whether more interventions are put into place to build capacity for more engagement of farmer groups in vanilla production. An example of such initiatives is that of the Red Cross-Tanzania

through which a project worth Euro 83. 685 was implemented in phases from the year 2015 to 2018 to build smallholder farmers' vanilla production capacity (https://www.trcs.or.tz/media/attachments/2021/05/21/vanilla-project-infographic-report.pdf).

Despite the market potential for this crop in the study area, the frameworks within which the business is conducted to ensure smallholder farmers' socio-economic sustainable livelihoods are not well coordinated. The scheme faces several challenges that reduce the possibility of meeting vanilla production standards necessary for meeting the domestic and international market demand for vanilla. In this regard, the objective to improve livelihoods among smallholder farmers through the practice is being impaired. Such challenges include smallholders' insufficient skills in technical and managerial capacity in production and processing of this sensitive crop. For example, knowledge on hand pollination techniques lack among many smallholder farmers. Inadequate infrastructure necessary to support crop production and processing, water scarcity and fluctuating climatic conditions. Also, fluctuations in export value, export and producer prices for Tanzanian vanilla are a challenge. Vanilla price fluctuations discourage farmers from investing energy and resources in its cultivation. However, the scheme guarantees the existence of a big vanilla market opportunity due to the high existing demand-supply gap. The COVID-19 pandemic led to price fluctuations, but for the scheme, it was an opportunity to be tapped by increasing its production. For instance, NEI in cooperation with Blue Pacific Company produce Kilimanjaro Vanilla, a brand that emphasizes the sourcing of organic vanilla from smallholder farmers in the region (https://www.bluepacificflavors.com/flavors/kilimanjarovanilla/).The pandemic created more market opportunities for vanilla extracts from the scheme as many countries which were highly affected could not produce the crop.

Nonetheless, unfair trade that drives market prices up, without sufficiently supporting farmers' production capacity endangers growth and more global market penetration for vanilla from the region. High market demand creates room for rising producer prices for green pods. The scramble for meeting the market demand creates room for tempering the quality of the supplied green vanilla pods from farmers, as the farmers tend to harvest before proper maturity. Some smallholder farmers would not wait for the crop to reach its maturity before harvesting. This spoils the quality of vanilla produced from this area and consequently reduces the market value for the products. Some of the organic vanilla farming activities under the Organic Vanilla Farming schemes are shown in Figure 5.6.

Figure 5. 6 Some of the organic vanilla farming activities in the Organic Vanilla Farming Scheme in Siha District

An organic vanilla plant in a farm

Demonstration on hand pollination of vanilla

Source: Research field data, (2020)

5.8 The Africado Organic Farming Scheme

The Africado Organic Farming Scheme, also located in Kilimanjaro Region is another scheme that is used in this study. The selection of the scheme suited the criteria of the cases that were desired for the study. These criteria include that the scheme is founded on the Africado Company that partners for business with organized groups of smallholder organic avocado out-growers. As an agribusiness to the partnership and being a producer itself, the company facilitates organic avocado by including smallholders and accessing the export market for the produced avocados. Since the smallholder organic farmers under the scheme are organized and their activities are enabled by the agribusiness, the existence social capital attributes and participation of smallholders in a specific value chain were expected. Therefore, the scheme provided a suitable case for answering the questions of the study. The details on the scheme are explained further.

5.8.1 Historical background and formation

Based in Sanya Juu Township in Siha District, Kilimanjaro Region, Africado Company Limited is an agribusiness company that was established in the year 2007. The purpose of the company is to extensively produce avocado fruits and become the largest avocado fruit producer and exporter in Tanzania, aiming to export Hass and other avocado varieties to European countries (Africado

Company Officer, 2020; https://www.globalgap.org). In the early years of its establishment, the company managed to own 138 ha of a farm estate called Kifufu, the farm which was formerly used for coffee cultivation (Africado Company Officer, 2020). On this farm, the company started cultivating the Hass avocado variety which is now in full production. In the year 2017, with the aim of extending its production, the company purchased another farm namely Garagoa of about 170 ha on which other avocado varieties were cultivated (Africado Officer, 2020). On this extended farm estate, the company cultivated more avocado (varieties Gem and Camen) which require a short period of cultivation before harvest.

During the establishment of the company's nucleus farm and the out-grower scheme, the company was supported by international development agencies like Nor-fund, and USAID-Tanzania. Other national and regional agricultural development agencies such as Tanzania Agriculture Productivity Program (TAPP) and Tanzania Horticultural Association (TAHA) also supported the establishment of the company.

5.8.2 The scheme's scope of operations

Despite being based in Kilimanjaro, the scope of operations of the scheme is extended to the neighboring regions of Arusha and Manyara. In all three regions, the company involves smallholder out-growers who supply avocado fruits to this company which together with those produced by the company are processed for export. Through its investment, the company has shown impacts in aspects that contribute to the country's foreign exchange through the export of avocados. It contributes to government revenues through taxation and increases income levels for smallholder organic avocado farmers in the regions. The company also undertakes sustainable farming practices which improve the environmental conditions around the area. Moreover, the company has created job opportunities for the communities within which the scheme operates. It has also created supply linkages with local suppliers, construction and service companies within its areas of operations (https://www.norfund.no/investment/africado-ltd/).

5.8.3 Smallholder farmers' engagement in the scheme

Apart from producing avocados from its nucleus farm, Africado has established an out-grower scheme to supplement its production. The company involves more than 2000 local smallholder farmers who produce avocado traditionally and supply it to the company. The company has set up an out-grower department that assists farmers in the neighborhoods. Through this department, the

company assists smallholder avocado farmers by subsidizing them with avocado seedlings to encourage farmers to plant. Furthermore, small-scale out-growers capacity building is enhanced. The department has Field Officers who visit farmers and teach the best practices for growing avocados. Through the department, Africado provides support and extension services in several aspects. The company provides training and technical advice to smallholder farmers on farming techniques such as site selection, planting, irrigation, mulching, pest and disease control, and post-harvest handling (UNDP, 2014). Smallholder farmers are also encouraged to invest in other avocado varieties with a shorter production period to increase the window for harvests. This is usually done by organizing farmers into smallholder groups that are formulated at the village level. In Siha District, smallholder organic avocado farmer groups are organized under the union of smallholder avocado farmer groups in Siha, in Kiswahili called Muungano wa Vikundi vya Wakulima wa Parachichi Siha (MUVIWAPASI). The groups are formulated mainly for access to training and capacity development in avocado farming activities. Some farming sites and activities under the Africado Organic Farming Scheme are portrayed in Figure 5.7.

Moreover, the company connects out-growers with other agricultural development companies. For instance, the company connected smallholder farmers to Cori ACP, a Belgian organization that assists agricultural companies in Africa and other developing countries to uplift the people's living standards. The Cori ACP Company designed programs to conduct training for farmers, in which relevant information was delivered to these farmers. Another company, Waitrose Company that is based in the United Kingdom once trained over 2000 avocado farmers with the main concern to try to help farmers improve avocado production. Furthermore, Africado company connects farmers to some supermarkets abroad.

Figure 5. 7 Some of the organic avocados farming activities in the Africado Organic Farming Scheme in Siha District

Some of the organic avocado farms in the Africado Organic Farming Scheme in Siha District

Source: Research field data, (2020)

5.8.4 Organic certification processes in the scheme

The avocado fruits produced from Africado company farm estates are not 100% organic. However, the company ensures compliance with sustainable farming methods, such as the application of bio-intensive pest management and growing cover crops to meet the targeted market requirements in Europe. The company ensures that it does not exceed the European market-specified or acceptable maximum chemical residue levels in the produced fruits. Notwithstanding this, Africado Company ensures that the avocado production process by its contracted smallholder farmers is conducted organically. Due to the complications that are associated with attaining the standards, the company has a policy that does not allow out-growers to use chemicals during cultivation. In this regard, knowingly or unknowingly the out-grower farmers apply organic farming practices in producing avocado fruits.

The company is connected to foreign certification agencies for access to international avocado markets. All operations and out-grower farmers in the scheme are Global GAP certified. The trademark indicates taking care of all concerns with sustainable agricultural practices. This fosters better penetration of produced avocados into international markets. For instance, between 2014 and 2015, more than 250 smallholder farmers working with Africado were Global GAP certified

(https://www.globalgap.org/ar/Profiles/b41f41b1-42c0-11e6-8751-6805ca037347/). Moreover, the company is certified under the Global Risk Assessment for Social Practices (GRASP). Apart from the Global G. A. P, depending on the specific market requirements, the company's avocado production certification with other small certifiers is inevitable. These are adapted to meet requirements for markets in countries where the company intends to export its products. For instance, selling in UK supermarkets is not possible without Sedex Members Ethical Trade Audit (SMETA)certification. Similarly, it is difficult to penetrate the Dutch market without Albert Heijn's Certification. The company is therefore certified with SMETA which is concerned with labor, health and safety, environmental and ethical standards, and the Albert Heijn Certification.

Certification of the out-grower farmers to other certifiers apart from Global G. A. P is more challenging because these farmers have not reached the capacity to produce in large quantities. Many of these farmers own between 2 to 8 avocado trees per farmer. In this regard, it becomes difficult for them to comply with the social certification standards under GRASP and SMETA. The company was in the process of finding the possibility to certify at least a few (20) of the avocado out-growers as organic growers. However, the process takes quite a long time and is costly.

5.8.5 Marketing operation indicators, potentials and challenges

Since its formation, the company aimed at becoming Tanzania's largest producer and exporter of avocado fruits, particularly the Hass variety in EU countries. Hass is by far the biggest variety in the world and Tanzania is still low in producing avocados with an average annual production of 7000 tons (https://www.tanzaniainvest.com/avocado). In this way, it cannot compete with countries like Peru, Chile, South Africa and Kenya, countries which produce Hass variety in large quantities. The extensive avocado production by the scheme would improve the country's position in the export of the product. Currently, the production and exportation of avocados are dominated by two companies, the Africado Company Ltd and the Rungwe Avocado Company Ltd which jointly produce more than 5000 tons per year (https://landportal.org/es/node/100629).

The latitude of the area in which avocado production takes place dictates the production season. Based on the overall Tanzanian latitude, the Hass variety production takes place between June and September. Peru, a country that has a big influence on the price in the European market also has its peak production in the same period. Regardless of being closer (about 7,009 km) to the European Union avocado market in comparison to other supplying countries like Peru (about

10,849 km) Tanzania´s level of competition is still low in terms of supply. Peru´s competitiveness and strong performance in the international market particularly in the Netherlands and Spain results from high quality production and commitment of farmers to sustainable production (https://producepay.com/resources/peruvian-avocado-exports-grow-conquering-europe/). The country thus becomes more competitive in terms of price compared to other countries including Tanzania. In Tanzania, the situation is very challenging, given the fact that production costs are high, but with low expected returns. Therefore, the Africado Company is prompted to extend production by introducing other varieties whose production comes in before the Hass variety to create room for an extended production season. The scheme has now extended its scope of production by producing other avocado varieties (Gem and Camen) to reach full production in a short period from June to September. The company expects to have fruit to sell when others are not supplying. Full production will not only have an impact on better prices but also on reducing costs that are incurred for the avocado processing facility, the Packhouse. The utilization of the Packhouse is currently very small, only between September and December and it is not utilized for the rest of the year. With the spread of the varieties, the Packhouse will be utilized efficiently. The company's export of its avocados is not conducted directly to the intended export destinations in Europe. The company is consequently connected to Westfalia Fruit, a huge avocado fruit collecting company in South Africa with many packing operations in many countries in Europe including Germany, the UK and Holland. After harvesting, sorting, cleaning, grading and packaging fruits at the company's premises, the fruits are then exported to Westfalia Fruit in South Africa for further export to Europe.

5.9 Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme

Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme is the third farming scheme that is used in this study. The scheme met the criteria for selecting the case for this study. First of all, the scheme is for organic farming activities that are done by smallholder organic farmers who are organized in groups. Smallholder group organization implies the higher possibility on the existence of cooperation and social networks which are the attributes of social capital that the study intended to investigate. Secondly, smallholder organic farming activities under the scheme are done through an enabling initiative, in this case the SAT. This is a not-for-profit initiative that aims to facilitate sustainable smallholder farming for enhancing the environment and rural farmers livelihoods. Through this facilitation, the elements that contribute to market participation of

smallholder farmers under the scheme were also likely to be supported, and hence should provide answers to the questions of the study.

5.9.1 Formation and historical background

SAT is an NGO that was established in 2009 as a project known as Bustani ya Tushikamane at Vianzi in Mvomero District in Morogoro Region. The organization was registered in 2011 under the Tanzanian Society Act (Cap. 337 R.E. 2002) (SAT Report, 2011). The main goal of its establishment was to foster sustainable farming practices, through the involvement of smallholder farmers in undertaking organic farming practices. Towards contributing to the global development goal of poverty reduction, the organization facilitates the smallholder farmers' engagement in organic farming practices for improving their socio-economic livelihoods while ensuring environmental sustainability. With smallholder organic farmers' engagement by the organization, and in collaboration with other stakeholders within and outside the country, many positive experiences in fostering sustainable farming and sustainability are observed. One of the credible experiences is the smallholder farmers' gained knowledge on the application of agro-ecological practices to improve livelihoods, conserve the environment and reduce pressure on natural resources.

5.9.2 The scope of operation

The organization works with smallholder farmers in various parts of the Morogoro Region where more than 2000 small-scale farmers work together under the umbrella of the initiative. Under this initiative, 70 farmer groups from 50 villages in the region are engaged in agro-ecological farming movements through Farmer Field Schools (SAT Report, 2020). The organization has expanded its scope of operation from training farmers in Morogoro through FFS to a more formalized skills development and capacity-building model. At the Vianzi Training Center, the organization executes a project on Curriculum Implementation Support for Training Institutes (CISTI), a project that aims at producing graduates in organic agriculture practices. In collaboration with about 29 Universities, 83 tutors have been trained under the project (SAT Report, 2020). Other notable projects implemented by SAT include the Uluguru Spice Project (USP), and the Farmers and Pastoralists Collaboration Project (FPC). All projects are implemented to foster agro-ecological farming practices, reduce conflicts between farmers and pastoralists, improve smallholder farmers' livelihoods and increase climate resilience. The organic farming training provided by SAT is

further extended to organic farmer groups beyond the region. The organization works on developing sustainable farming practices and provides training to other African countries like Ethiopia. The organization collaborates with partners from the public and private sectors. Such include the Government through the Ministry of Agriculture, the local government authorities, the government agricultural officers, sustainable farming development companies, universities and research and training institutions.

5.9.3 Pillars of operation of SAT

The holistic approach applied by SAT organization involving other stakeholders in undertaking the scheme's activities establishes an innovation platform to attain its goals through the four pillars. These are research, knowledge dissemination, knowledge application and networking. In all the scheme's activities, the organization applies the principle of working with smallholder farmers horizontally and face to face to ensure farmers' experiences. The principle is the toolkit that allows building on these four pillars without losing the focus on farmers' needs.

The research pillar encompasses various participatory types of research on sustainable and lucrative production plans. These are conducted in collaboration with agricultural institutions like the Sokoine University of Agriculture. SAT collaborates with smallholder farmers and universities to create demand-driven research on agro-ecological farming methods. Trainers, students, SAT and farmers are involved in research. Research is undertaken in a way that brings direct results to farmers. The research pillar follows an interdisciplinary approach that implements socio-economic, ecological and technical research on inputs and technologies suitable for sustainable agriculture, innovative on-farm, and off-farm practices, market research, extension education and value addition. For example, to date, more than ten research studies are completed in the field of agro-ecology (SAT Officer, 2020).

Through the knowledge dissemination pillar, SAT builds capacity among the scheme participants through training, information sharing, awareness creation, lobbying and advocacy on sustainable agriculture. Conducted at the SAT Farmer Training Centre, knowledge dissemination is achieved through sustainable farming training offered to smallholder farmers, the community and other stakeholders. The initiative disseminates knowledge on organic farming practices through various means including working with groups. Currently, SAT works with more than 200 groups through FFS with an average of 30 farmers per group, making in all a total of 6000 farmers (SAT Officer, 2020). More than 2000 farmers in organic farmer groups have been trained on organic farming

methods and more than 1500 farmers are trained in sustainable agriculture at SAT Farmer Training Centre and demonstration farms. Moreover, about 3000 people have benefited from the training offered by SAT through short courses (SAT Officer, 2020).

Another knowledge dissemination platform under the scheme is the "Mkulima Mbunifu" Magazine which provides information on sustainable organic farming practices. It comes out once per month reaching about 9000 people (SAT Report, 2017). Likewise, participation in various trade fairs and exhibitions in the country and abroad offers room for disseminating knowledge. SAT participates in the Nanenane Trade Fair which takes place on the 8th of August every year. Through this trade fair, a large mass of people get an opportunity to visit SAT's pavilion and learn about sustainable farming aspects. Moreover, organic farmers under SAT use the Trade Fair as an opportunity to showcase and sell their organic products. With regard to international fairs and exhibitions for instance, in 2019 the organization attended the BioFach exhibitions in Germany and in 2016, some representative smallholder farmers attended a trade fair in India (SAT Officer, 2020). The exhibitions provide learning platforms and awareness creation on organic agriculture and sustainability as well as market opportunities for organic farmers working under SAT.

Furthermore, knowledge dissemination by the scheme does not end with sustainable farming practices. SAT has assisted the development of financial skills to at least 35 farmer groups by establishing the Village Saving and Lending System. The system helps farmers to support themselves through saving and lending in a way that farmers overcome financial challenges they encounter (SAT Report, 2017). The knowledge application pillar is also realized at SAT through participation in the whole organic farming value chain. For instance, the organization now has 500 acres at the Farmer Training Center in which apart from organic production, numerous sustainable farming practices are demonstrated. The participation is in the whole value chain from farming, processing, packaging and marketing. SAT establishes knowledge incubation for the demonstration of sustainable agriculture by incorporating small-scale farmers.

With the networking pillar, the scheme is networked with many organizations within and outside the country. For instance, SAT works with TOAM (Tanzania Organic Agriculture Movement), an East African organic market custodian and an entity for organic certification in Tanzania. Other organizations that collaborate with SAT include KOAN (Kenya Organic Agriculture Network) in Kenya, NOGAMU (Network of Organic Agriculture Movements of Uganda), BOAM in Burundi, and ROAM in Rwanda; all these are National Organic Agricultural Movements (NOAMs). Others

include the Ministry of Agriculture and the Ministry of Water in which SAT provides training and developing curriculums to be implemented in agricultural training institutes. International networks include the Nile Development and Services Project operating in six countries. SAT works with Ethiopia on a sustainable agriculture project known as Nono. SAT also works with the Ecological Organic Agriculture Initiative of the African Union (EOA-I). Smallholder organic farmers under SAT and other stakeholders get exposed to platforms for sharing knowledge, experiences and challenges associated with the practice.

In realizing its goals through the explained pillars, SAT's focus is on collaboration with smallholder organic farmers in the region. Under its umbrella, smallholder farmers are organized into groups, sensitized and empowered on leadership skills and group dynamics. They get trained on formulating constitutions, by-laws, rules and regulations to be used by the groups. While working in organic farming projects, the groups become cemented by being introduced to other livelihoods sustaining activities such as micro-credit financing, access to loans and opening small businesses. Through their groups, farmers form what is called Village Lending and Saving Associations (VLSA). Through training and guidance, smallholder farmers formulate village savings in which each one has access to savings, borrowing, lending and creating capital. SAT works with farmers through contractual arrangements. The contracts spell out the responsibilities of the parties. For example, the FFS contract explains for SAT to initially provide seeds and farm implements like watering supplies, hoes and the like to farmers. On the other side, the contract explains the responsibilities of farmers which include undertaking farming and farm management activities by farmers themselves.

5.9.4 Market opportunities for organic production in the scheme

The primary market for organic products produced by smallholder farmers is the SAT small organic shop located in Kilakala in Morogoro Town. Prospectively, the organization is expecting to open a new organic shop in the Dodoma City where there is a fast-growing demand from organic consumers (https://kilimo.org/tag/market-access/). Beyond the agro-ecological training offered to smallholder organic farmers, SAT creates a new and extended network of markets for organic products. SAT strives to find opportunities to connect organic farmers to local and international markets where organic products could be sold at premium prices while ensuring transparency in the whole production value chain. Such transparency is realized through quality traceability, farmers' involvement in price settings, and profit allocations. Currently, the farmers benefit from

new market opportunities where up to 50% of formerly trained farmers have new market access (SAT Report, 2017). SAT has also established market partnerships with for example "I am Organic", an organic certified retail shop located at Wildflower Café at Slipway in Dar es Salaam. To this partner, SAT offers a wide variety of fresh healthy organic products like fresh organic fruits and vegetables, herbs and spices. The scheme supplies about six big boxes of freshly packed varieties of fruits and vegetables weekly to the retailer, worth a total value of 500,000 Tshs. (https://kilimo.org/tag/market-access/). Figure 5.8. portrays some of the activities that are undertaken within the Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme.

5.9.5 Key operational indicator in the scheme

The SAT Organic Farming Scheme indicates positive prospects for its growth and demonstrates good possibilities for improved smallholder organic farmers' livelihoods through their engagement in agro-ecological sustainable farming practices. The scheme reveals progress in sustainable practices through a wide range of its operations. Notably, the scheme's growth is observed through the extended training and training facilities. Such include the expanded farming land for organic farming practices, increased research activities through participatory research workshops, collaboration and networking, and expanded market scope for organic products. The scheme's mission to transform farming practices through knowledge dissemination and to ensure farmers' capacity for the full engagement in the value chain is realized. The scheme is globally recognized, has received awards like the One World Award as recognition for its contribution in promoting sustainability practices through organic farming while supporting smallholder farmers in improving their livelihoods.

Figure 5. 8 Some organic farming activities under the Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme in Morogoro Region

Smallholder organic farming women group | Smallholder organic farming gardens

SAT organic market in Kilakala Centre | TOAM organic certified Vijana Amkeni Group

Source: Research field data, (2020)

5.10 Conclusion on the schemes

The explanations on the schemes have provided an in-depth understanding of smallholder organic farming activities under the umbrella of agribusinesses and initiatives. The selected cases from both regions provided good grounds for conducting the study. Organic farming practices have been shown to be well conducted in cases with similar goals of facilitating environmental and social-ecological sustainability while ensuring economic livelihoods among smallholder farmers. Therefore, selection of smallholder organic farming schemes from two regional settings provided

a suitable scope for conducting the study. The three schemes provided a great contribution to understanding of social capital aspects of cooperation and networking and how they influence market participation of smallholder farmers in the study area. The categorization of regions of the study, the defined organic farming schemes and sub-schemes, smallholder farmer groups and organic farming crops that are cultivated in groups are summarized in Table 5.1.

Table 5. 1 The categorization of regions, organic farming schemes, sub-schemes, smallholder organic farming groups and organically cultivated crops used in the study

S/N	Region	Schemes	Sub-schemes	SHOF groups	Cultivated crops
1.	Kilimanjaro	Organic Vanilla Farming Scheme	UWAVAKI	Koboko A	Vanilla
2.				Koboko B	
3.			NEI	Wanri	
4.				Fuka	
5.				Mendai	
6.		Africado Organic Farming Scheme	MUVIWAPASI	Naibili	Avocados
7.				Kyelokamana	
8.	Morogoro	SAT Organic Farming Scheme		Muungano	Horticultural crops and spices
9.				Maendeleo	
10.				Masimbu	
11.				Upatacho	
12.				Vijana Amkeni	
13.				Vijana Jitahidi	

Source: Research field data, (2020)

5.11 Chapter summary

This chapter has presented the details on the areas and various characteristics on the cases where the study was undertaken. The chapter started by explaining the location, demographic and socio-economic characteristics of Tanzania, the country where the study was undertaken. The chapter also presented the key features of Kilimanjaro and Morogoro regions, the specific regions in which the study was undertaken. From these regions, the characteristics of the districts of Siha in the Kilimanjaro Region and Mvomero, Morogoro Urban, and Morogoro Rural districts in the Morogoro Region have also been presented. It is in these districts where smallholder organic farming schemes and smallholder farmers with their respective groups selected for the study were found. The chapter then explained the list of demographic and social-economic characteristics that surround smallholder organic farmer groups in the schemes and regions where the study was conducted.

Moreover, the chapter presented details on the three organic farming schemes which were defined by this study. In these schemes, the modalities of undertaking organic farming activities through the collaboration of smallholder farmers and community-based or private initiatives and companies have been highlighted. Also, the roles of smallholder organic farmers as producers and the roles of initiatives as facilitators, enablers and markets have also been explained. Challenges, potentials, and prospects for growth and expansion of production and penetration of organic products to international markets have been explained in schemes. Furthermore, the chapter presented a conclusion on the overall state and suitability of the schemes as cases for the study. The chapter has ended with this summary. The next chapter presents the internal cooperation and market participation of smallholder organic farmers in the study area.

6 CHAPTER SIX: INTERNAL COOPERATION AND MARKET PARTICIPATION OF SMALLHOLDER ORGANIC FARMERS

6.1 Introduction

This chapter presents the findings on the question that examined the influence of internal cooperation on market participation of smallholder organic farmers in the study area. The chapter starts by presenting brief explanations on the background under which the findings were made. Then, it presents the findings on how smallholder farmers' market participation is influenced by internal cooperation in smallholder farmer groups in each organic farming scheme. Moreover, the chapter presents cross-case discussions to derive reconciled and conclusive findings for all the schemes. Finally, the chapter makes an overall conclusion on the question and presents a summary of what has been presented.

6.2 Background information

When assessing market participation of smallholder farmers, this study examined how the three aspects of market participation are influenced by the aspects of cooperation that exist in smallholder organic farmer groups. The findings are derived from qualitative data that were collected from 13 groups in which focus group discussions were conducted with an average of ten farmers in each group in the three schemes. The three aspects of market participation are, the existing supply chain relationships between farmers and other actors in the value chain, smallholder farmers' supply of organic products to market channels and smallholders' overcoming of market barriers that are encountered in organic farming in the schemes. On the other hand, the internal cooperation factors that were reflected to influence smallholders' market participation are cooperation structure, cooperation governance, negotiations and quality management in smallholder farmer groups. The findings are on independent analyses in each of the farming schemes which are the Vanilla, Africado and SAT organic farming schemes. The presentations of findings on each of the schemes and the respective case discussions of findings are detailed in the following parts of the chapter.

6.3 Internal cooperation and market participation of smallholder farmers in the Organic Vanilla Farming Scheme

The findings on internal cooperation and market participation of smallholder farmers in this scheme are derived from data that were collected from five organic farmer groups of Koboko A, Koboko B, Fuka, Mendai and Wanri. Among these groups, three work under the Union of Vanilla Farmers in Kilimanjaro (UWAVAKI) and the others work with the Natural Extract Industries Company (NEI). Moreover, findings also emanate from contributions of key informants with whom in-depth interviews were conducted. The following are the explanations of the findings on the themes.

6.3.1 Smallholders' market participation through supply chain relationships

In explaining the state of smallholders' market participation through supply chain relationships in the scheme, findings indicate that smallholder organic farmers relate with various actors in the supply chain. These actors include enablers to smallholder farmers and the Government who are the intermediaries to the relationships. Others include international organizations which periodically support and engage smallholder farmers in projects and clients from domestic and international markets. These actors relate in aspects such as production, processing, inventory and facilities, transportation and distribution, strategies, coordination, markets, capacity building and legal arrangements for ensuring farmers' rights within the value chain. The findings further indicate that, in the identified supply chain, smallholders' relationships are mainly attached to two independent enabling partners, the UWAVAKI and NEI for ventures in supply of organic vanilla as raw material. These two enablers are engaged in facilitation activities in the entire value chain from on-farm production, early stages processing, storing and searching for markets for vanilla produce. The relationships between main actors in the vanilla value chain in the scheme are presented in Table 6.1.

When reflecting on the internal cooperation aspects, the identified forms of relationships appear to be influenced by the formal governance in smallholder farmer groups. For instance, smallholder farmers working together in formal groups and through unions, enables them to create trusting relationships with buyers abroad through which the markets for the products are established. The formality of groups gives farmers more credibility to partner with other actors who trust working with formal groups and unions rather than partnering with individual farmers. This is supported by a farmer in a discussion with the Koboko Group who explains that: -

"Just like I have explained before, to access markets for our vanilla product we first formulated formal groups in which together we collect our vanilla, then we created a union for the purpose of processing and selling together (Koboko A, Pos. 73)".

Table 6.1 Main actors' engagement in the organic vanilla value chain in the scheme

Actor	**Obligations**	**Level of engagement in the value chain**		
		Vanilla production	Vanilla processing	Vanilla trading
The Government	Training and extension services, regulation and intermediation	√		√
Natural Extract Industries Company (NEI)	Training and extension services, quality management and vanilla purchasing	√	√	√
Umoja wa Wakulima wa Vanila Kilimanjaro (UWAVAKI)	Standard control, market searching and linkages		√	√
Smallholder Vanilla farmer groups	Farm clearance, planting, weeding, farm management and harvesting	√		

Source: Research field data, (2020)

Moreover, findings indicate the supply chain relationships between smallholder farmers and other actors are exercised through the capacity building programs. Smallholder farmers under the scheme receive training on farm management practices such as vanilla seedlings, planting, weeding and pollination to enhance vanilla production capacities. However, the mode of relationships through training for capacity building are made possible through the formal governance mode of cooperation in the farmer groups. The formal organization of farmers in groups enables farmers to be part of the chain through production and facilitation of training from other actors. Nevertheless, smallholder farmers still lack capacity to penetrate the vanilla volatile premium markets. The partners then become aggregators of vanilla produced by smallholder farmers in groups. The vanilla beans later undergo processing and extraction stages ready for

marketing abroad. In this regard, farmers' participation in the supply chain ends after the supply of raw vanilla to the partners.

Findings also explain price determination for the vanilla produce as one of the elements through which smallholder organic farmers in the scheme relate with other actors in the value chain. Participants in many groups in the scheme argued that, despite being producers and sellers of vanilla, smallholders are not in positions to determine the prices for their products. This is due to either lack of capacity to know the world market prices or lack of room to be included in the entire process of determining the prices within the value chain. In many cases, for example, smallholders argued on challenges that they get in accessing price negotiations for their products. On the contrary, smallholders have to accept the prices that are predetermined by the partners. In case smallholders compare and see which partners have attractive prices, they might shift from the current to new partners who have more attractive prices in the market. Such situations affect the established relationships between smallholders and former partners in the value chain as explained by a farmer in Koboko B Group who argued that: -

"… there are some group farmers who at first had promised to sell their vanilla to UWAVAKI and we had estimated the sales from them, but at the last minute they decided to sell to NEI…I think price is the root cause of disintegration. For instance, one buyer buys at 10,000Tshs and the other buys at 12,000Tshs. It is obvious that one will go for a high price if there is no binding contract for a farmer to sell to a certain buyer (Koboko B, Pos. 57-58)".

6.3.2 Smallholders' market participation through the supply of vanilla products to market channels

Smallholder farmers under the scheme participate in markets through supplying vanilla products as raw material. As far as the conditions of smallholder farmers' supply of vanilla to market channels are concerned, this study found out that the typical channel that is used is the value-added reseller (VAR) processing outlet market channel. Smallholder farmers supply the raw unprocessed vanilla to UWAVAKI and NEI. In this sense, smallholders' market participation through supply of products to market channels entails supplying of raw unprocessed vanilla produce to the two partners who later add value and sell the produce to international markets.

Smallholders' supply of organic vanilla in the scheme is found to be influenced by the cooperation that is established within groups. The formal organization and structuring of groups which indicate the formal governance in groups enable farmers to coordinate and organize themselves. These facilitate the production of vanilla at farm level for supplying into the VAR market channel.

Through this formal governance in groups, smallholders get to be officially recognized by actors who buy the supplied vanilla produces. Moreover, the use of formally recognized committees and group undertakings that are guided by rules, by-laws and operational guidelines that are stipulated within groups are elements of formal governance that influence smallholders' supply of organic vanilla produce to market channels. In ensuring large quantities of vanilla are supplied as required by markets for example, smallholder farmers use these forms of formal governance which enable them to do collective supply of vanilla to the market channels as explained by a farmer in one of the groups: -

"That is why we decided to formulate a union/cooperative, so that it could be easy for us to sell our vanilla. Through the union it is easy to find markets from abroad. You know when buyers come, they want to find the product in great quantity. For this matter no individual group or individual person can process vanilla… So, our intention is to sell our vanilla together (Wanri Group, Pos. 61)".

Besides the supply of products according to the required standards, there are some instances where smallholder farmers do not wait for proper maturity of vanilla before harvesting. Such farmers tend to lose patience to wait for proper maturity of vanilla in case there are rises in the world market price for the product. They do so to catch up with the prevailing market price. In this regard, the quality of the supplied vanilla in market channels becomes too low to meet the required standards. In such cases, governance aspects within groups control such malpractices to enhance supply of quality vanilla products in the market. A member in one of the focus group discussions from some governance activities that are taken as means for overcoming the challenge are explained by a farmer in the Koboko B Group: -

"The group usually conducts meetings at least twice a year, but there is a committee which conducts meetings once a month. In these meetings, various aspects of vanilla production and its development are being discussed. Such include the growth of vanilla in the farms, its challenges and harvesting of vanilla before maturity (Koboko B, Pos. 47)".

Findings also indicate that smallholder farmers' supply of vanilla at stipulated standards in the scheme is facilitated by the presence of internal quality management mechanisms among farmer groups. To make sure that farmers meet the required standards of production and are able to supply their products, they established a mechanism in which they internally monitor each farmer to ensure individual compliance. Smallholder farmers in their groups check every farmer to see if he or she complies with established organic farming standards and requirements. The aim is to ensure

production of quality organic vanilla that meets the needs of target markets. The fact contributes in influencing the supply of quality products to the target markets as argued by a farmer in the KobokoA Group who says: -

"Since we are not selling our vanilla individually, our group cooperation particularly during the cultivation stage helps us to monitor each other and ensure that quality standards have been followed. Such include for instance, the use of natural fertilizers and proper pollination. As a result, we expect to get more yields and consequently improve the supply (Koboko A, Pos. 70)".

Despite the urge for smallholder organic farmers to participate in markets through increased supply of vanilla produces, market forces around the scheme affect the vanilla supply system in place. Big variations in prices of vanilla green pods offered by the two market outlets led to irrational changes in decisions for collective supply of the products. Some smallholder farmers do not stick anymore to the formerly contracted partner, breach the contracts and shift their supply to the counterpart buyer. Supply of products in such situations becomes greatly affected. Such a concern is explained by one member in discussions with the Koboko B Group.

"For instance, there are some group farmers who at first had promised to sell their vanilla to UWAVAKI and we had estimated the sales from them, but at the last minute they decided to sell to NEI. In another instance, another farmer has sent me a message that this year he will sell his vanilla to UWAVAKI. This farmer belonged to this group but later he left for NEI. Bad enough he was one of the committee members. Now he wants to come back as he says he is not bound by NEI (Vanilla- Koboko B, Pos. 57)".

Before supplying vanilla to the intended market channels, farmers make estimates for the expected collective sales after harvests. The expected supply of vanilla to the intended partner is however being jeopardized after some of these farmers change their decision against collective selling of the vanilla through groups. Such practices are likely to destroy smallholders' long term relationships with buyers and consequently affect the established supply of vanilla products into markets.

6.3.3 Smallholders' market participation through overcoming of market barriers

This study found several barriers that hinder smallholder farmers to access local and global markets. The main barriers are on certification for organic vanilla production, quantity and quality of production of vanilla. The findings indicate that the certification process is one of the challenging factors for the smallholder farmers to access organic vanilla markets. Smallholder

organic farmers under this scheme still lack the technical capacity for their vanilla production to be internally certified. However, smallholder farmers groups try to overcome this barrier by certifying their vanilla produces in neighboring countries like Uganda. Overcoming the certification barrier is enhanced by the formal governance that is established in groups in the scheme. This condition gives the groups credibility for their vanilla to be certified by external certifiers.

"We have a certifier, from our neighboring country Uganda. We usually take our product to Uganda where a Fair-Trade certification company assesses our vanilla product for certification. The company has already provided us with a certificate (Koboko A, Pos. 53)".

Farmers explain that the only authority in the country that farmers rely on for the quality check is the Tanzania Bureau of Standards (TBS). Quality checks under the authority focus on grading vanilla at various levels only and not to certify the production process. This reduces credibility to the organic vanilla customers as far as certification of vanilla is concerned.

Supplying organic vanilla in needed quantity and quality is also found to be posing challenges to smallholder's access to vanilla markets. Market needs for vanilla are higher to the extent that many buyers need the supply in large quantities. Smallholders in the scheme are not in a position to produce and sell the volumes individually. The need for collective selling to meet the demanded quantity is the adopted practice in the scheme. This is facilitated by the formal governance that is established in groups. Through this form of governance, selling of vanilla in required quantities is done by the union and hence meets the quantity barrier as explained by a farmer from a group discussion with Wanri Group.

"By being guided with rules, regulations and guidelines, our being in group enforces us to abide by the organic production standards, resulting in improved quality and quantity of produced vanilla. Concerning overcoming the market entry barriers, as a group we do not have capacity to do that. But that is done collectively with other groups under our union, by ensuring production in greater quantities, and by meeting specified standards. (Wanri Group, Pos. 70)".

Parallel to the supply of the needed quantity of vanilla is the quality of the supplied vanilla. Smallholder organic vanilla farmer groups encounter this market barrier. Markets need to buy vanilla that is organically produced and to the required standards otherwise the prices will be lower. Findings indicate many groups of smallholder organic farmers in the scheme to be producing vanilla to the required market standards. This is influenced by the cooperation in groups in which

internal quality management mechanisms are used by groups to monitor vanilla production. Smallholders in their groups internally monitor farmers to check if every farmer complies to the established organic farming standards. Explaining on market barriers that are overcome by internal quality management in groups, farmers in Koboko B and Fuka groups had this to say: -

"You know organic vanilla farming does not need the use of chemical inputs like fertilizers and pesticides. Now what we usually do as a group is to visit one another's farm plots and inspect if one of us is going against the farming regulations we must follow as organic farmers. Because at the end of the day our vanilla is sold collectively, if one tampers with the cultivation requirements, we all lose the market (Koboko B, Pos. 64)".

"Being guided by NEI we vanilla farmers help each other to make sure we produce vanilla that meets standards and thus can compete in the market. At different levels of production, for instance in farm preparation, weeding and during pollination we as a group or individually visit one another's farm and in case of any problem we share the experience and advise one another (Fuka Group, Pos. 62)".

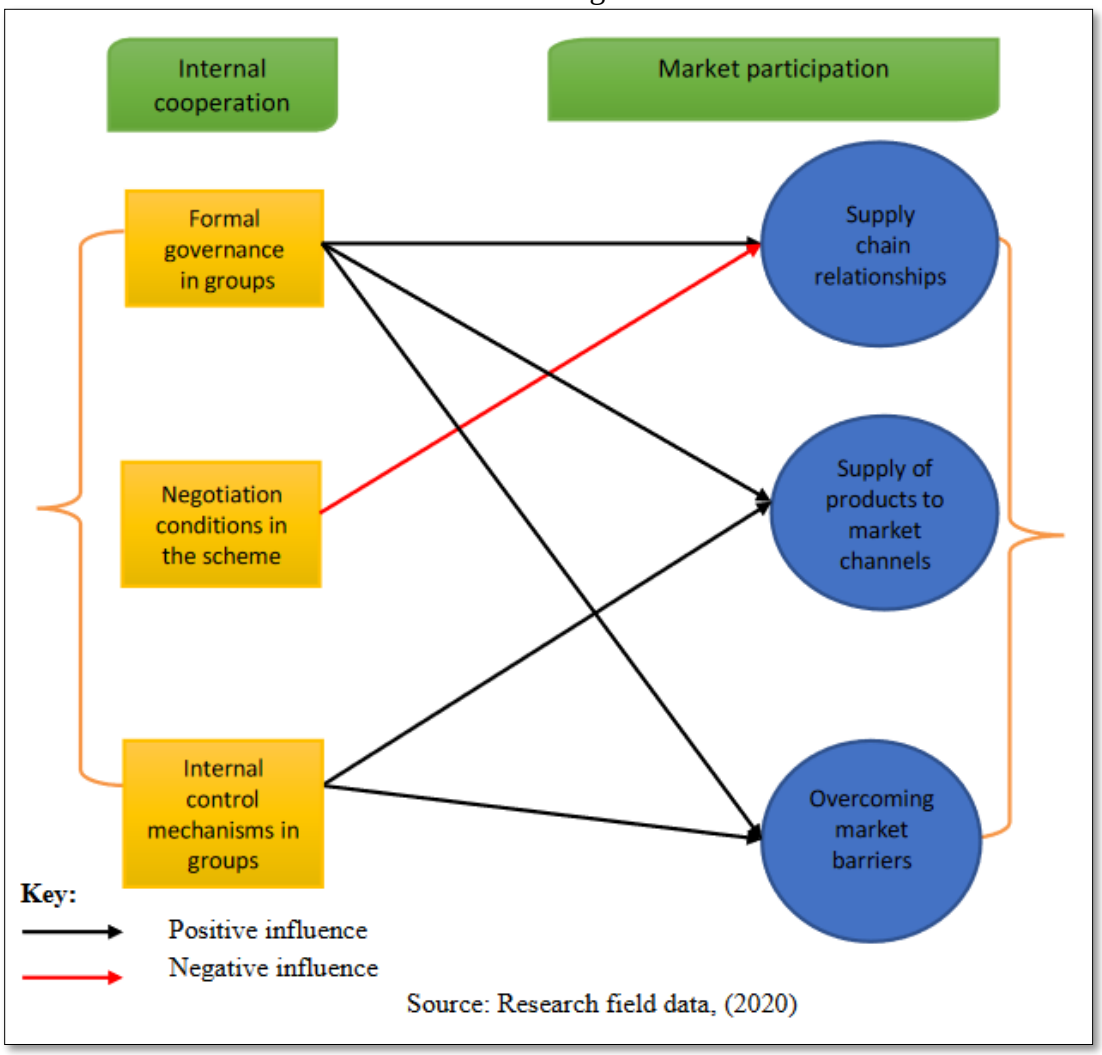
Despite the presence of internal quality management mechanisms as cooperation attitudes for ensuring high quality production of vanilla in groups, lack of commitment in some farmers in ensuring quality production is still a challenge. This is due to reasons that, regardless of them belonging into organic farmer groups, smallholder farmers still hold private decisions on where to sell. The current mode of governance has not formulated rules that bind farmers' commitment and accountability for a maintained quality production.

6.3.4 Summary of findings on the scheme

The above information has explained the findings regarding the aspects of smallholder market participation as they are influenced by internal cooperation in smallholder organic farming in the scheme. The identified elements are summarized in Figure 6.1. The findings have indicated that smallholders' market participation is highly influenced by the formal governance systems that are established in groups. These enable the groups to be formally recognized and trusted to partner with other actors in the value chain. The governance system also effects reliability and recognition of groups to partners within the value chain. Moreover, smallholders' market participation is negatively influenced by the negotiation conditions that exist between groups and partners in the scheme. The nature of business relationships that exist in the scheme limit the opportunities for smallholders to negotiate on prices for vanilla produces. Furthermore, smallholders' market

participation is influenced by the internal quality management mechanisms that are established in groups. Groups have created their own internal quality management mechanisms that they use in monitoring each vanilla farmer to comply to produce to the required qualities and standards that meet the market demands. With these explanations, this study concludes that smallholders' market participation is influenced by the formal governance systems and the internal quality management practices that are established in groups. However, the participation is negatively influenced by the negotiation conditions that exist in the Organic Vanilla Farming Scheme.

Figure 6. 1 Smallholders' market participation influenced by internal cooperation in the Organic Vanilla Farming Scheme



6.4 Internal cooperation and market participation of smallholder farmers in the Africado Organic Farming Scheme

This scheme is operated through a business partnership of smallholder organic avocado farmer groups under MUVIWAPASI Union and Africado Company Limited located in Kilimanjaro Region. The company operates in the entire region by facilitating smallholder organic avocado farming, purchasing, value addition and exporting. In endeavors to seek answers on smallholders' internal cooperation and market participation in the scheme, qualitative data were collected from Kyelokamana and Naibili organic avocado farming groups which work under the scheme. The overall findings as far as market participation and the influencing factors of internal cooperation in the scheme are explained. These indicate smallholder farmers participate in markets through supply chain relationships, supply of products to market channels and overcoming market barriers as it was projected by the study. Explanations on the findings from the analyses of the answers are detailed in the following parts.

6.4.1 Smallholders' market participation through supply chain relationships

This study found the main actors in the supply chain under this scheme to be the smallholder organic avocado farmers organized under the MUVIWAPASI Union and the Africado Company. The latter is a company in the region that engages in large scale avocado production and processing for export. The supply relationship between the actors is such that smallholders work as out-growers to the Africado Company. Apart from being the main client of smallholders' avocado produce, the company also acts as an enabler/ facilitator to smallholder farmers in their out-grower schemes. The other actor is the government through agricultural and extension officers who periodically provide general extension services to farmers. The findings reveal that smallholder farmers are included in the value chain of this scheme during the early stages of production. This is at farm clearance, planting, weeding and entire management of the farm. The company assists smallholder farmers in their groups by providing on farm technical services on organic production. The company further chips in for harvesting and proceeds with the processing stages of sorting, cleaning, grading and packaging of avocados ready for exporting. The roles of these actors are presented in Table 6.2.

Reflecting on the relationships between smallholders and other actors on internal cooperation, findings show that supply chain relationships are influenced by the existent formal governance that is developed in many avocado farmer groups in the scheme. The relationships are enhanced

by the formally recognized rules and by-laws, leadership and committees that have been set for leading and managing organic farming activities in groups. This form of governance facilitates easy coordination and facilitation of farming activities between smallholder avocado farmers and the company. For example, farmers strengthen their relationships within the chain through the use of a representative committee which plays the representation role in the executive business meetings between farmers and the company. Due to the structure of the business, few smallholder farmer members attend the Board Meeting that comprises farmers and representatives of the Africado Company. In this meeting, all matters that trouble the two parties are discussed. Since all farmer groups cannot attend the meeting, a committee that is formed by one avocado farmer member from every village to represent farmers in the Board Meeting was formed. The representation by the committee helps smallholder farmers to settle the issues that press them and therefore continue to undertake their farming activities and business with the company in the scheme. The roles of such a committee are as explained: -

"We also have a committee in which one representative from each village is a board member. Their main activity is to represent us in expressing our concerns. The committee sits with the main table and speaks on our behalf and that is what they have been doing (Kyelokamana Group, Pos. 52)".

The findings also explain that the relationships between smallholder farmers and the Africado Company are influenced by negotiations aspects that exist as cooperation elements in groups. In this regard, supply chain relationships between smallholders and Africado are observed to be negatively influenced by the modes of price determination for the avocado produces. Many smallholder farmer groups explained that they do not have room to participate in determining markets and deciding prices for the avocados. Smallholders explain they lack opportunities to negotiate on market access and price offers with the company and other stakeholders involved in organic farming in the scheme. For example, when arguing on the modes of accessing markets access and price setting, farmers claimed not to know how markets are accessed and how prices are determined in the scheme. A farmer in Naibili Group explained this situation with the following argument: -

"The aspect that we are still not conversant with is how marketing is conducted. We still do not know how much they sell abroad, what costs are being incurred until the last payment we receive, to us, all is still darkness (Naibili Group, Pos. 26)".

Table 6. 2 Actors' engagement in the avocado value chain in Africado Organic Farming Scheme

Actor	Obligations	Level of engagement in the value chain		
		Avocado production	Avocado processing	Avocado trading
The Government	Training and extension services, regulation and intermediation	√		√
Africado Company Limited	Training, standard control and certification, harvesting, buying, value addition and exporting	√	√	√
Muungano wa Vikundi vya Wakulima wa Parachichi Siha (MUVIWAPASI)	Uniting avocado farmers, representing avocado farmers		√	√
Smallholder Avocado farmer groups	Farm clearance, planting, weeding, farm management and harvesting	√		

Source: Research field data, (2020)

Moreover, smallholders' examples of cases that explain their limitations in accessing markets and prices for avocado produces are explained by a farmer who argues that: -

"The information we got was that Peru produced a lot of avocados which led the world's market price to drop. But in this year the price has gone high because Peru did not get much. So, we sold at an average price of 1300⁺Tshs per kg. However, the fact is for us to be given that price means Africado must have sold at a price twice as that. Bad enough, no matter how we may try, the company would never let us know of the price the company sells abroad. No farmer or a worker can have that information. Even the managers are restricted from disclosing such information and if they do, then they are in trouble. When we ask, the only reply we get is that those are companies secrets and are not to be opened without permission (Kyelokamana Group, Pos. 50)".

Furthermore, the findings reveal that, the supply chain relationships in the scheme are negatively influenced by the limitations in negotiating contracts between smallholder farmers and the Africado Company. Smallholders argue that contractual agreements do not provide clear information on partners' roles in handling some of the business costs that are incurred. There is lack of clear terms in for example handling transaction costs. Out of prior agreements between

farmers and the company, smallholders are obliged to incur costs related to cleaning, sorting and transportation of avocados from farms to the company's Packhouse. In these instances, costs for the rejects are also to be taken by farmers as explained in a group discussion.

"So, we considered Africado to be our recommendable market. But upon entering a contract, there are terms and conditions which were introduced that could have direct impacts to our sales. That there could be some reductions on the amount obtained after selling avocados. That is when we saw it as a problem. We were obliged to incur transportation costs from the farms to Africado's Packhouse and from the Packhouse to markets abroad like South Africa, America and elsewhere. Some other costs that were to be covered were on cleaning, sorting and removing the reject fruits. So, all the costs were to be imposed to us farmers. This implies for instance, if 1kg of avocado fruits was sold at 2000 Tshs., to us it would have been sold for 1000Tshs. because of the amount that is reduced to cover the transaction costs (Naibili Farmer Group, Pos. 27)".

The explained instances of smallholders' restrictions to negotiate on access to markets, price determination and handling of transaction costs for their produce impair their relationships with the company. Under such condition farmers may be convinced to look for other means which they experience to be more suitable in accessing the services.

6.4.2 Smallholders' market participation through the supply of avocado produce to market channels

On this aspect of analysis, the study identified that the market channel used under this scheme is the reseller market channel. It is also found that the typical market for the smallholders' organic avocados supply is the Africado Company. The company uses this supply to supplement avocado production for export that is undertaken from its own farm estates. Nonetheless, in constrained situations, smallholders extend the supply of organic avocados to other clients from neighboring countries who also use the supply for export abroad.

The study found that the mechanisms through which supply of organic avocados is conducted may have consequential impacts on the continuum of smallholders' participation in the markets under the scheme. The study identified several factors that weaken smallholders' supply of the products to the markets. These range from production capacities in terms of resource availability such as water and other infrastructure, production quantity and quality and smallholders' access to market information. In such situations, smallholders are surrounded by fear and anxiety over the

consequences they are likely to encounter in case the supply is done to clients other than Africado as was explained by farmers in discussions.

"Some farmers agreed to sell to these new businessmen but some of us did not agree because we were afraid since we had already entered a contract with Africado. We knew once Africado becomes aware of a farmer to have sold to these businessmen, this farmer will be automatically cancelled and will not be enhanced by Africado in any way. So, we can do business with other buyers, but we cannot do that simply because we have entered a contract with Africado (Naibili Group, Pos. 28)".

Focusing on the factors that the study postulated on supply of avocados to the markets, it is found that smallholders' supply of organic avocados is influenced by quality management and negotiation aspects. Quality management and negotiation aspects are explained to manipulate the aforementioned factors revolving around production and supply of avocados thus triggering smallholders' motives to engage in supply. Regarding quality management, findings explain that organic avocado farming under the scheme is done through certification. Smallholder farmers ensure quality management through adhering to organic production standards that are adopted and are verified through certification. Smallholder farmers are required to comply to the organic production standards that are controlled by certifiers. Arguing on the presence of control standards as one of the key quality management mechanisms in the scheme, a farmer in Kyelokamana Group said that: -

"With avocado cultivation, we use organic farming standards and we have been certified as organic farmers by Global GAP. The certification was done through Africado Company to which we are affiliated (Kyelokamana Group, Pos. 35)".

With this state, smallholders develop confidence in supplying the organic avocados to markets since they use the certification opportunity to produce products that are acceptable to market standards.

With regards to negotiation aspects, smallholders' supply of avocado products to markets is however retarded by the business system that does not provide a platform for negotiations between farmers and their counterpart partner, the Africado Company. The study anticipated finding opportunities for smallholders to negotiate the prices of the supplied avocado products. However, smallholders supply the products to the scheme with predetermined prices, which they do not willingly accept. In many cases, prices are determined by representatives in the scheme.

Smallholders are not exposed to pricing methods and do not have access to market prices where the scheme sells the products as it was explained by farmers in the discussions.

"The aspect that we are still not conversant with, is how marketing is conducted. We still do not know how much they sell abroad, what costs are being incurred until the last payment we receive, to us is still darkness (Naibili Group, Pos. 26)".

Smallholders' lack of opportunities to negotiate on prices for their products as indicated in arguments signify aspects that impair their participation in organic farming markets in the scheme.

6.4.3 Smallholders' market participation through overcoming of the market barriers

In analyzing market barriers in the scheme cases, the study found smallholders' lack of capacity in terms of facilities and techniques as barriers that hinder full engagement and participation in avocado markets. Since farmers do not have the capacity (facilities and technical) for handling value chain activities after harvest, they tend to have no option other than relying on one monopolistic company for the supply of their avocado products. Regardless of the presence of other interested buyers from neighboring countries and abroad, smallholder farmers indicated they have no choice to establish business relationship with these buyers. In this regard, farmers are limited in market scope for their supply and their motive for the overall market participation is being compromised. Smallholders in many groups expressed these concerns during the group discussions as explained by one member from Kyelokamana Group who had this to clarify.

"Because Africado sells seedlings to us and assists us in farming activities, the company is the only buyer of our products and they have not given us a chance to find other market channels elsewhere. Because we have signed a contract with this company Africado, we are not allowed to establish market relationship with other buyers (Kyelokamana Group, Pos. 48)".

However, within these discovered conditions, the study examined the hypothesized elements that enable smallholders to overcome the barriers to avocado markets in the scheme. The study found out that smallholder avocado farmers manage to supply organic avocado products to the defined market through producing organic avocados that are organically certified. The major condition to organic production that Africado Company needs is production of organic avocados. To attain this, the company facilitates certification of the organic production activities of its partner smallholders. It does this as an external quality management mechanism whereby, in order to become a partner to its business, an organic farmer must be certified. This is verified by smallholder farmers under

the scheme who assert their activities to be organically certified by the facilitation of Africado as explained by a farmer in Kyelokamana Group who says: -

"With avocado cultivation, we use organic farming standards and we have been certified as organic farmers by Global GAP. The certification was done through Africado Company to which we are affiliated (Kyelokamana Group, Pos. 35)".

With this state, the main barrier to supply avocados to markets by smallholders is overcome by the external quality management under the scheme that is facilitated by Africado. Smallholder farmers explained that organic production standards that are adopted are verified through certification. Farmers are required to comply with the standards that are controlled by certifiers. It is therefore contended that smallholder farmers overcome the market barriers through avocado certification process by Global GAP at Africado. This assures farmers' supply of their products into the Africado market and hence their participation in the scheme.

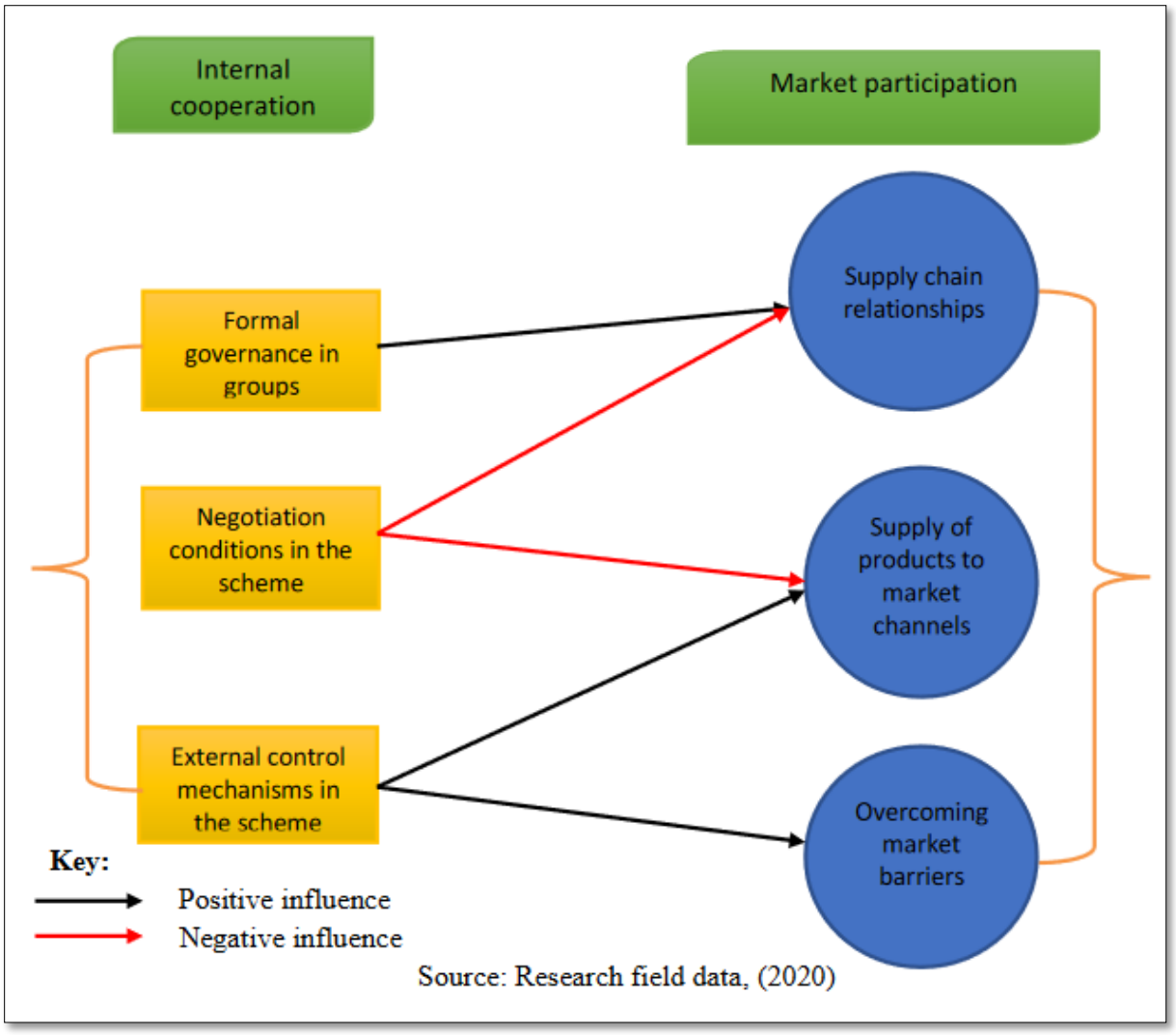
6.4.4 Summary of findings on the scheme

The findings above have explained how smallholders' market participation is influenced by internal cooperation in smallholder organic farming in the Africado Farming Scheme. The summarized elements that are found are presented in Figure 6.2. In aggregated aspects of market participation and cooperation, the findings indicate smallholders' market participation is highly influenced by the formal governance mechanisms that are established by groups in the scheme. These mechanisms (recognized rules and by-laws, leadership and use of committees) are explained to facilitate the relationships, coordination and implementation of farming activities between smallholder avocado farmers and their market stakeholders.

Smallholders' market participation is also negatively influenced by the negotiation conditions that exist between scheme partners. These conditions are unfavorable to farmers to the extent that they limit their opportunity to explore market access and other price options for the produce. Moreover, the conditions limit smallholders' participation in establishing suitable contractual agreements on responsibilities for transaction costs between the parties. These conditions impair smallholder farmers' market participation in the scheme. Furthermore, smallholders' market participation is influenced by the external quality management mechanisms which are realized through control of production standards and certification of organic production by Africado Company. These facilitate supply of the products and overcoming of market barriers by smallholder farmers.

It is therefore concluded that, smallholders' market participation in the Africado Organic Farming Scheme is influenced by the formal governance and external quality management mechanisms established in groups and is also negatively influenced by the negotiation conditions within the scheme.

Figure 6. 2 Smallholders' market participation influenced by internal cooperation in Africado Scheme



6.4.5 Internal cooperation and market participation of smallholder organic farmers under Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme

The investigations undertaken into this scheme also focused on understanding how smallholder farmers' market participation is influenced by internal cooperation aspects in farmer groups. The analysis is based on how the three distinctive market participation aspects are influenced by the predefined aspects of cooperation in the groups. Qualitative means of data collection and subsequent analyses were undertaken. FGDs were administered to smallholder groups that undertake organic farming activities under the facilitation of SAT. The investigations were undertaken through FGDs with six organic farming groups that operate under the scheme. The groups comprise an average of ten respondents each. These groups are Maendeleo Group, Masimbu Group and Muungano Group. Others are Upatacho Group, Vijana Amkeni Group and Vijana Jitahidi Group. The specific locations in Morogoro Region in which the groups are located are Mvomero and Morogoro districts. Responses from the respondents on the investigations and their respective findings are explained more in the following parts of the chapter.

6.4.6 Smallholders market participation through supply chain relationships in the scheme

Like the other two organic farming schemes in Kilimanjaro, a framework on the supply chain relationships and the extent of smallholder farmers' inclusion in the value chain under this scheme was also studied. Findings show that smallholder farmers are the core actors with the major roles to produce organic produce for supply in the intended markets. These farmers work in partnership with SAT, an initiative which is developing the main market for the organic produce of these farmers. The initiative also takes responsibility for coaching smallholders in managing their organic farming practices. The initiative mainly engages smallholders in farming and processing of organic horticultural products and spices.

Apart from the main partner organization, it is also found that smallholders have developed supply chain relationships with the respective agricultural authorities in the districts and other actors or intermediaries that do business in organic horticulture and spices products in the region. This is explained by members from Vijana Amkeni and Vijana Jitahidi groups during FGDs.

"What we do, before selling we conduct a bit of market research where we go to the markets closer to our area. There we meet auctioneers with whom we try to build friendships to get marketing information particularly on the market price for the specific spice (Vijana Amkeni, Pos. 46)".

"But also, we as farmers, we can get markets elsewhere. For instance, I have communication with people at Mawenzi Market (Vijana Jitahidi, Pos. 61)".

The existing chain relationship is strong and inclusive as it provides room for farmers capacity building in terms of production, processing and market access for the organic products. Being part of the supply chain, smallholders have improved the production capacity resulting from trainings provided by the partner organization. Nevertheless, the flow of market information that is necessary for identifying markets among farmers is also enhanced as explained by one of the farmers during discussions in groups.

"However, SAT has improved our capacity to find markets through phones which have been provided to us. We use them to exchange information on organic farming practices and share market information among groups (Vijana Amkeni, Pos. 47)".

Findings also show that, through the existing chain relationships, farmers get opportunities for creating networks for supplying not only to local and domestic markets, but for accessing international markets for organic products. The partner organization SAT also facilitates farmers' involvement in local and international trade fairs and exhibitions to motivate more participation in the organic production value chain. In these platforms, smallholders get to learn various market strategies from other organic farmers and enhance their growth. The model of supply relationships between smallholder farmers and other main actors in the scheme is represented in Table 6.3.

The nature of supply chain relationships that exist between smallholder farmers and SAT are found to be influenced by the internal cooperation in smallholder farmers groups in the scheme. The study found out that, supply chain relationships are influenced by the formal governance mode that exists in many smallholder farmer groups in the scheme. The study found many groups under the scheme to be formally registered to respective authorities, they have leadership structures that are clear with formally recognized leaders. Participants in the discussions argued that groups have formally recognized members who are active and attend meetings. Another form of formal governance is the use of committees to coordinate activities for the development of groups. Moreover, findings show that many groups in the scheme are institutionally governed in undertaking farming activities. For example, participants in group discussions asserted that their groups have constitutions, they use established rules and by-laws that guide all the undertakings in organic farming.

"*We have a constitution and by-laws which guide us in managing and making our group strong. That is why in the past when we started, we were 27 members in the group. Later, some members acted contrary to our constitution and were eliminated them from the group according to the rules of the constitution…. (Vijana Jitahidi, Pos. 56)".*

Table 6. 3 Main actors' engagement in the organic horticulture and spices value chain in SAT Scheme

Actor	**Obligations**	**Level of engagement in the value chain**		
		Horticultural crops and spices production	Horticultural crops and spices processing	Horticultural crops and spices marketing
The Government	Extension services, business control and regulation	√		√
Sustainable Agriculture Tanzania (SAT)	Training and facilitation, standard control, value addition, promotion and marketing	√	√	√
Smallholder organic horticulture and spices farmers	Farming, planting, weeding, harvesting, value addition and marketing	√	√	√

Source: Research field data, (2020)

Being formally structured and institutionally governed, smallholder farmer groups become well-coordinated with other actors in the supply chain. The enabling partner organizations including SAT find it easy to work with organized farmer groups in handling and facilitating organic farming activities from on-farm production to points of sale. Training on organic farming practices and facilitation for smallholders' access to finance for boosting organic production are also made easier in formally structured and governed groups. All these foster suitable supply relationships between smallholder farmers and the other organic farming actors in the scheme.

The study made further analysis and found out that supply chain relationships between smallholder farmers and other actors in the scheme are influenced by gender concerns that exist in smallholder groups. On this aspect, gender concerns were raised in groups that are composed of a majority of female members. In these cases, gender aspects revealed some social, cultural and traditional

factors that affect cooperation of smallholder female farmers and other members in groups. Participants argued that in cases where females mostly engage in organic farming activities, their husbands forbid them to effectively participate in activities such as group meetings, and in national and international exhibitions of organic products. Men would also not allow their wives to travel to other regions for conducting market negotiations with buyers. These situations discourage women organic farmers from fully engaging in group organic farming practices in the value chain. A farmer in Muungano Group for example, presented a concern that shows how female farmers face challenges of participating in organic farming as she said: -

"…You know we are married, and our men are envious and would not allow us to fully engage in these production activities. For instance, sometimes they would not allow us even to bring the vegetable packs to SAT market or attend meetings. So, if it is about full engagement in this business, only a few of us can do so. Majority cannot move forward due to masculinity traditions (Muungano Group, Pos. 57)".

In this regard, the supply chain relationships between smallholder farmers and SAT are explained to be negatively influenced by the specific gender concerns that are raised by many groups that are composed by many women in the scheme. Despite gender being found not to be a concern in all groups in the scheme, the fact that it was raised in many groups that are formed by many women members and the current sensitivity in gender issues justify the need to consider the minority groups that were found to have gender concerns.

6.4.7 Smallholders market participation through the supply of organic products to market channels

The study identified varied types of organic crops produced and supplied by smallholder farmers under this scheme. The farmers engage in production and supply of spices like ginger, black paper, cinnamon and cardamom, a variety of horticultural crops including vegetable produce such as spinach, onions, beetroot, carrots, amaranth, cabbage and other crops of a similar nature. The supply is also on organically produced fruits like mangoes, pawpaw, bananas, pineapples and citrus fruits. The supply extends further to organic tubers such as cassavas, yams and sweet potatoes. The market channels through which the smallholder farmers supply under this scheme are the wholesaler, intermediary and end-consumer market channels. Of these channels, the greater part of smallholders' organic supply is absorbed by SAT. The remaining part is distributed to intermediaries, to the local consumer markets in the region, and to a small extent to some organic

supermarkets in neighboring regions like Dar es Salaam. Concerning the supply of organic products, the findings reveal the main concern by smallholder farmers is on improving quality and quantity of these products for the extended scope of supply beyond local markets in the region. Moreover, findings indicate farmers to have started utilizing internal cooperation values towards meeting this goal. Findings indicate smallholders' supply of organic products to the existing markets to be influenced by three internal cooperation components that are practiced in smallholder groups.

Smallholders' supply of organic products to the existing markets is influenced by the formal governance mechanisms that exist in organic farmer groups. In discussions, smallholder farmers explained that many of their groups are registered to respective authorities, have clear leadership structures with formally recognized leaders. They further argued that groups have formally recognized members who are active and attend meetings and they use formal committees to coordinate farming activities. In so doing, farmers come up with organic farming strategies that improve the production and supply of quality and quantity of organic products in the respective market channels. Having different group committees for example has been a means to enable groups to search and access new markets for supplying organic products. This is for example argued by a farmer from Maendeleo Group who had this to say: -

"We have various committees in our group…The marketing committee is concerned with searching for markets that can absorb all farm produce and making sure no produce may be destroyed because of remaining in the farm. Quality management committee ensures that products are of the required quality before reaching the market (Maendeleo Group, Pos. 23)".

Findings further indicate that the supply of organic products in market channels by smallholder farmers is influenced by the formal governance established in groups in the scheme. Organic farmers explained that farming activities in groups are guided by the established rules, regulations and by-laws that they formulated. As group members, they are obliged to abide by these rules and guidelines. Some of these guidelines require them to produce sufficiently for supplying to their target markets. This is ascertained by some members during FGD who argued that: -

"*We have by-laws which govern our group and group activities. Some of these by-laws require every group member to produce in large quantities so that we have enough organic products to be taken to the market (Maendeleo Group, Pos. 53)".*

Smallholders' compliance with established laws and regulations make them produce to the required quantities and hence enable them to supply the products to markets as required. In so doing the established forms of group governance in the scheme influence smallholders' supply of products to markets.

In further assessment on the supply of organic products to target markets, the study found it to be influenced by smallholder organic farmers' limited access to negotiation opportunities with other stakeholders in the scheme. The study found lack of opportunities to negotiate on market access and pricing mechanisms of the organic produces in many smallholder organic farmer groups in the scheme. Smallholder farmers explained lack of exposure on how market access and final prices of the produces are handled. In many cases, they find themselves working under predetermined decisions as explained by some of them.

"Talking of price for our organic vegetables is really a challenge because in the market we are forced to sell at the same price as conventional products...We have a big challenge when it comes to price negotiations for our products. At SAT market, our vegetables are accepted at 300 Tshs. per bouquet and being resold at 500Tshs. In such a situation, we decide to sell on our own. However, when we sell individually within the village we sell at the same 500Tshs (Maendeleo Group, Pos. 57- 59)".

In instances where smallholder organic farmers are not satisfied with the prices that the partners are setting, they may decide to change the mode of selling their products or changing their business partnerships. This state negatively influences smallholder farmers' supply of organic products to already determined markets in the scheme.

6.4.8 Smallholders' market participation through overcoming of market barriers

The barriers that hinder smallholder farmers' efforts towards participating in organic products markets are various factors surrounding the production and marketing system in place. These range from low quality and quantities of products, lack of technical and financial capacity necessary for organic products value addition, poor transportation infrastructure and lack of well-defined market premises for the organic products. The study hypothesized on the role of internal cooperation in reducing the magnitude of the market barriers that smallholder farmers face in their organic farming business. Findings indicate that, the overcoming of market barriers caused by low quality of products is influenced by internal quality management mechanisms that are established in many groups in the scheme. In ensuring controlled production, smallholders explained they adopt

internal quality management through various practices such as compliance to organic farming specifications, proper planting, use of proper seeds and use of organic fertilizers in their production. In attaining these, smallholders in their groups internally check and assure that every farmer follows guidelines and produces according to the requirements. A vegetable farmer in Upatacho Mgeta Group for example explained the various internal quality management mechanisms that their group adopted.

"…We have a farm assessment committee, harvests assessment committee and discipline committee. After the committees have made assessments on organic farm products, decisions are made by all group members depending on what has been observed. If a farmer did not follow organic standards during cultivation, he or she is automatically eliminated from the group (Upatacho Mgeta Group, Pos. 63)".

The observed adoption of internal quality management mechanisms to enhance quality of organic products has been playing a greater role in producing quality products supplied to the target markets. Farmers for instance explain the processes that they use in monitoring production using committees to make sure that supplied products meet the required quality.

"…. Our committee is responsible for controlling the produced products. We inspect the products at the site (collection point) and separate the rejects from the those with required quality to ensure that they are in good quality before taking them to the SAT markets. We make sure that the vegetable bouquets are properly knotted and well packed in the crates… (Muungano Group, Pos. 19)".

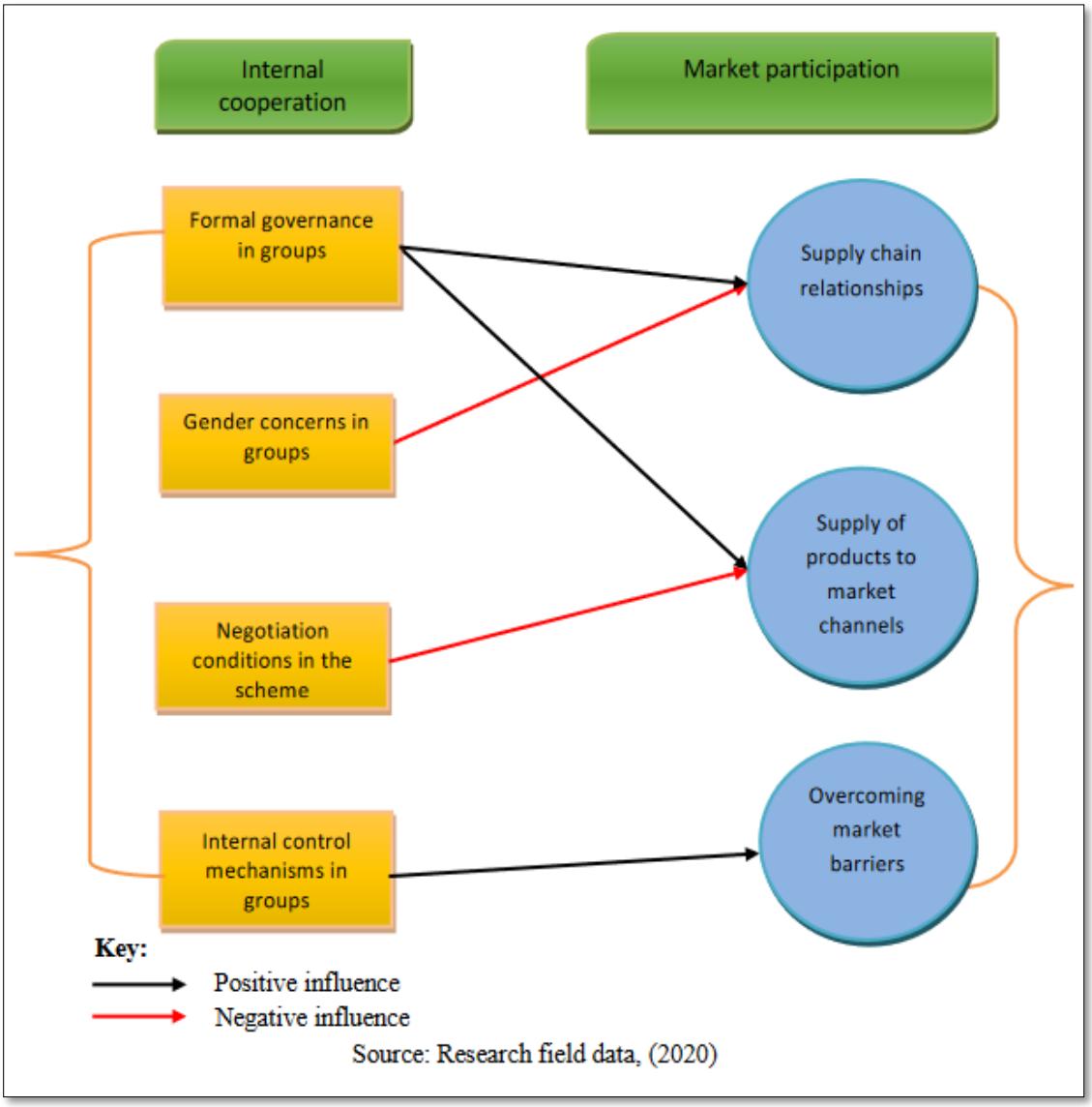
Once smallholders use the internal quality management mechanism, it helps them produce to the required quality and standards and hence helps them to supply the required products to the target markets. In this way, overcoming market barriers that are caused by poor product qualities is influenced by the internal quality management mechanisms that smallholder groups in the scheme adopt.

6.4.9 Summary of findings on the scheme

The elements that are presented in Figure 6.3. summarize the overall argumentations on the findings on how smallholders' market participation is influenced by internal cooperation in SAT Organic Farming Scheme. Without categorizing the contents of market participation and cooperation, the findings indicate that smallholders' market participation in the scheme is influenced by the formal governance mechanisms that are established by groups and the gender concerns that are found to exist in some groups in the scheme. This formal governance of groups

through formal registrations and formal membership, the use of recognized rules and by-laws, leadership and committees facilitate the relationships and formalization of business in organic farming between smallholder farmers and the chain actors and stakeholders. Gender concerns that are explained through cultural practices that limit women from freely participating in group activities also negatively influence the smallholders' market participation in the scheme.

Figure 6. 3 Smallholders' market participation influenced by internal cooperation in SAT Scheme



Moreover, smallholders' market participation in the scheme is explained to be negatively influenced by the negotiation conditions that exist between scheme partners. The existence of conditions that hinder farmers from searching for other possible markets and other price options

limit their participation in organic products markets in the scheme. Furthermore, findings indicate smallholders market participation in the scheme is influenced by internal quality management mechanisms that are established by farmers in the scheme. On this aspect, smallholder farmers in their groups are required to supply quality products to markets. To attain this, farmer groups design deliberate mechanisms in which they visit and inspect each other's farming practices to make sure that they produce and supply organic products that are to market standards. In so doing, they encounter market barriers and hence participate in supplying the products into target markets under the scheme. From these standpoints, this study concludes that, market participation of smallholder farmers in the SAT scheme is influenced by the formal governance and the internal quality management that are instituted in groups. However, gender concerns that are raised in groups and unfavorable negotiation conditions in the scheme negatively influence smallholder farmers participation in organic markets under the Scheme.

6.4.10 Cross-case reconciliation of findings

As regards the findings of the study on the role of internal cooperation in influencing smallholders' market participation in the schemes, variations and similarities in findings are observed. In all the three schemes, the findings have similarly indicated smallholders' market participation to be influenced by the formal governance mechanisms that are established in farmer groups. Despite the fact that the influencing factors do not appear equally in all variables of market participation, the occurrence of any variable of participation in the scheme signifies its contribution in influencing market participation. As explained in all the schemes, the modalities of operation by using formally recognized rules and by-laws, leadership and committees in one way or another facilitate smallholders' formal business relationships with actors and stakeholders in the value chain.

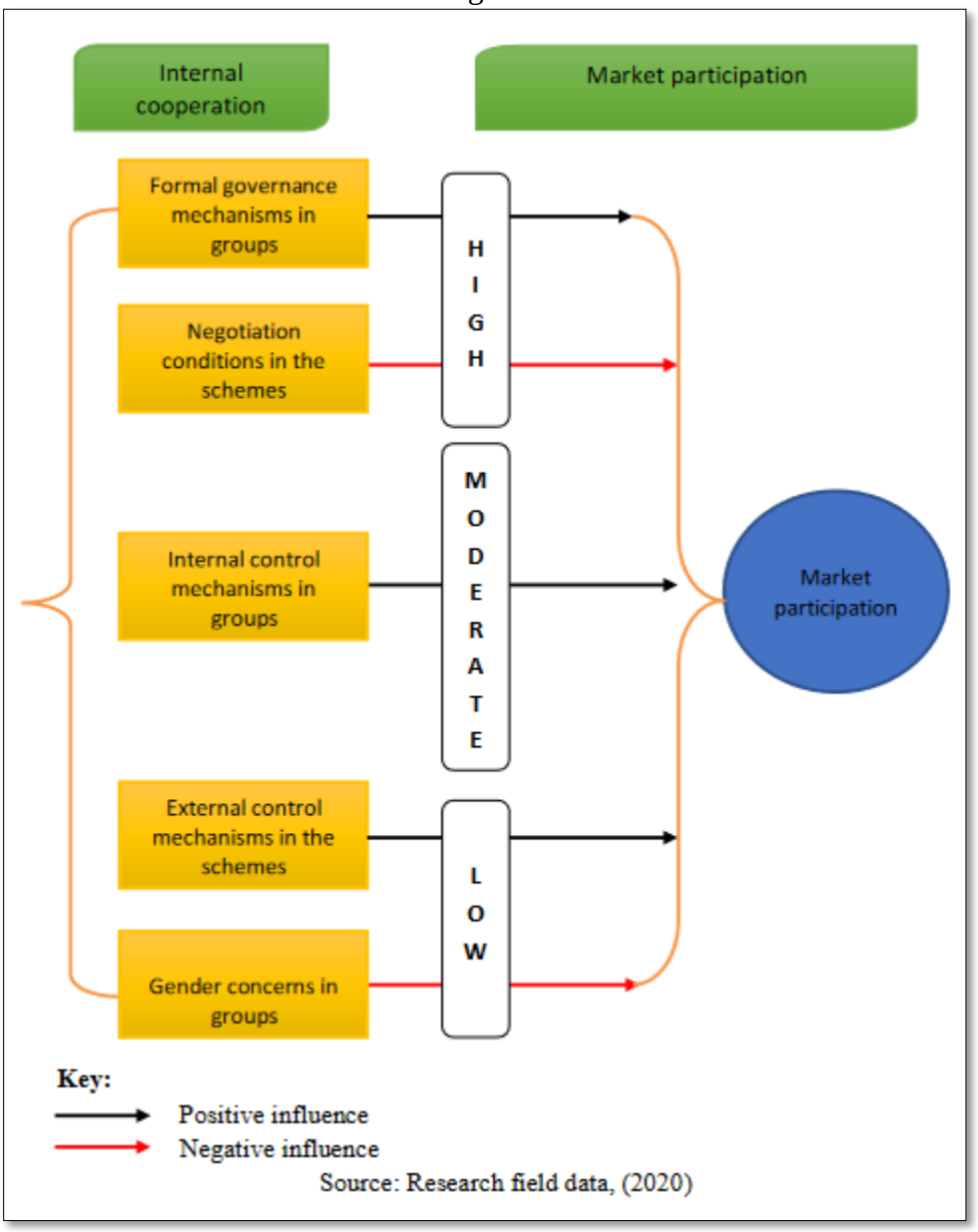
The findings have similarly indicated smallholders' market participation to be negatively influenced by the negotiation conditions that exist between smallholder farmer groups and business partners in all schemes. The findings indicate the existence of unfavorable negotiation conditions that limit smallholder organic farmers' opportunity to expand their horizons to access markets for organic produces. Also, the lack of clarity in setting and negotiating prices between smallholders and their business partners affects the morale for smallholders to sell organic produce to current markets in the schemes. Since the concerns for the negotiation conditions that exist between smallholder farmers and their partners exist in each scheme, it is an indication that market

participation of smallholders is also highly influenced by these conditions. Since many of the negotiation conditions revealed hinder the smallholders, it is an indication that they negatively influence them to participate in organic markets in the schemes.

Smallholders' market participation is also moderately influenced by the internal quality management mechanisms that are practiced in smallholder groups in the schemes. These factors are highlighted in the Vanilla and SAT schemes with more emphasis in the Vanilla Scheme. Disregarding the variations in participation under the influence of internal quality management mechanisms between schemes, its concerns in the two schemes indicate its importance in influencing smallholders market participation. Furthermore, the findings have indicated that smallholders' market participation is slightly influenced by the external quality management mechanisms and gender concerns that were raised by smallholder farmers in some groups in the schemes. External quality management practices have less influence as they were only raised in the Africado Scheme. On the other hand, gender concerns also have lower influence as they were only raised in SAT scheme as discouraging women's participation in group organic farming activities. These factors have generally low strengths in influencing market participation as they are each explained in only one scheme among others.

To sum up and reconcile the findings from the schemes, this study concludes that smallholders' market participation is highly influenced by the formal governance mechanisms that smallholders have laid down in their groups. Smallholders' market participation is also highly but negatively influenced by the negotiation conditions that exist between smallholders and their business partners in the schemes. Moreover, smallholders market participation is moderately influenced by the internal quality management mechanisms that are formulated by smallholder farmer groups in the schemes. Furthermore, smallholders' market participation is slightly influenced by the external quality management mechanisms that schemes have established to help farmer groups to produce organic products that meet the market standards. Also, smallholders' market participation is slightly influenced by the gender concerns that exist in groups in the schemes. Figure 6.4. represents a summary of the overall findings from the schemes.

Figure 6. 4 Smallholders' market participation influenced by internal cooperation in organic farming schemes



6.4.11 Chapter summary

This chapter has presented the findings on how smallholders' market participation is influenced by internal cooperation aspects in smallholder organic farming schemes. In these explanations, variations in findings based on the identified variables of internal cooperation and market participation in each scheme have been explained. Thereafter, the final findings on market participation and internal cooperation in every scheme were aggregated.

The chapter also presented cross-case discussions to derive reconciled findings on all the schemes. The reconciliation led to findings on how smallholders' market participation is influenced by internal cooperation aspects in the schemes. In this, it has been generally found that smallholder's market participation in the schemes is highly influenced by formal governance mechanisms that groups have established and negotiation conditions that exist between smallholders and their business partners in the schemes. It is also found that smallholders' market participation is moderately influenced by the internal quality management mechanisms that smallholder groups have established. Moreover, the study found that external quality management and gender concerns that exist in groups have some influence on smallholders' market participation in the schemes. The next chapter discusses social networks and market participation of smallholder organic farmers in organic farming schemes in the study area.

7 CHAPTER SEVEN: SOCIAL NETWORKS AND MARKET PARTICIPATION OF SMALLHOLDER ORGANIC FARMERS

7.1 Introduction

This chapter presents the findings on the second scenario research question that asked how market participation of smallholder organic farmers is influenced by social networks that are established by farmers in the study area. Beginning with explanations on how the findings on the question were arrived at, the chapter then presents the findings on how smallholder farmers' market participation is influenced by social networks that farmers have developed in course of undertaking organic farming activities under each specific scheme. The chapter continues with a presentation of cross-case discussions to harmonize the similar and varied findings from schemes into a reconciled understanding of findings. The chapter makes a final conclusion on the research question and ends with a summary.

7.2 Background information

This study examined how supply chain relationships, supply of products to market channels and overcoming of market barriers as elements of smallholders' market participation are influenced by social networks that are established by smallholder farmer groups in the schemes. The social network variables that were reflected on market participation are forms of social networks, the modes of governing the relations under the networks and information exchange. From the three organic farming schemes of Vanilla, Africado and Sustainable Agriculture Tanzania (SAT), a total of thirteen smallholder organic farmer groups provided data through FGDs. In-depth interviews with key informants from the schemes also complemented the data. The study indicates that smallholder organic farmers have other external links and collaborations beyond the main business partners. Farmers are linked with Non-Governmental Organizations, public and private institutions, private development support agencies, donors and other private and development initiatives. Other forms of smallholder external links include social groups and unions of smallholder farmers, social media and networking platforms. These collaborators work to facilitate the development of smallholder farmers in various areas such as production, capacity building, fund mobilization, certification facilitation, products selling and market information access. In linking and collaborating with these networks, smallholder farmers are helped to participate in organic farming markets under the schemes. Details on findings from specific schemes are presented in the following parts of the chapter.

7.3 Social networks and market participation of smallholder farmers in the Organic Vanilla Farming Scheme

The five organic farmer groups of Koboko A, Koboko B, Fuka, Mendai and Wanri have provided information on social networks and market participation of smallholder farmers in the Organic Vanilla Farming Scheme. The study found that the main organizations in which smallholder farmers under the scheme are socially linked are Red Cross Spain/Tanzania, NACTAD, FRORESTER, Enviro-care, farmer-clients links through social media, and other smallholder farmer groups in the scheme. Table 7.1 provides a summary of social networks that are linked with farmers under Organic Vanilla Farming Scheme.

Table 7. 1 Social network agencies in Organic Vanilla Farming Scheme

No.	Social network	Form of agency	Linkage with farmer groups
1.	Red Cross Spain/Tanzania	Non-Governmental Organization (NGO)	Capacity building, infrastructure support and advisory practices
2.	NACTAD	Non-Governmental Organization (NGO)	Farmers training on sustainable production and market access
3.	FRORESTER	Non-Governmental Organization (NGO)	Sustainable farming practices and environmental conservation
4.	Enviro-care	Non-Governmental Organization (NGO)	Propagation of environmental conservation and sustainable farming
5.	Social media	Platform	Networking and marketing
6.	Farmers social groups	Group	Networking and marketing

Source: Research field data, (2020)

Many forms of social links and collaborations that smallholders establish with these actors are formal and are officially recognized by the scheme and the respective District Authorities. Farmers explained that if a certain organization for instance, intends to disseminate information or conduct a certain training or seminar to farmer groups, it informs the district authority, and the authority gives directives on how the intended activity should be conducted. The information is then cascaded to the lower levels of the authority for implementation. Participation of smallholder farmers in organic farming markets through supply chain relationships, supply of products to market channels and overcoming of market barriers in the scheme are found to be influenced by some components from the identified social networks. Detailed explanations on the findings under the scheme are provided below.

7.3.1 Social networks on smallholders' supply chain relationships

As explained in the previous chapter, smallholder organic farmers relate with various actors in the supply chain. Farmers' engagement in the organic farming supply chain makes them relate with varieties of stakeholders who in one way or another facilitate their core and non-core business. The established relationships in the value chain are influenced by forms of social networks that smallholder farmers create within and outside the scheme. Findings indicate that smallholder farmers' supply chain relationships are strengthened by established links and collaborations. There are varied reasons for collaborations between farmers and the networks. For instance, smallholder farmer groups collaborate with NGOs and private initiatives to access training, access information and knowledge on vanilla farming, environmental protection, entrepreneurship, agribusiness and overall economic development. In so doing, the supply chain relationships of smallholders with other actors within the scheme are improved. Citing examples on how smallholders' supply chain relationships are enhanced by the training and information provision from Red Cross, a collaboration agency that the farmers are linked to, a farmer in a group discussion from Koboko Group explained that: -

"There are fliers which give explanations concerning vanilla farming from planting to harvesting. We first got these fliers from Red Cross who were our stakeholders. We also get some seminars, for instance in the past two weeks we had a seminar in which we learnt that along with vanilla farming, we should also cultivate other crops like banana and undertake some other income generating activities (Koboko A: Pos. 97 – 97)".

These forms of training and information provision help smallholders acquire knowledge that they can use to update their capacity to handle activities and practices in the value chain. Such situations improve smallholders' relationships with other actors in the value chain. Besides, partnering with other actors through training and capacity enhancement, smallholders cement their internal collaborations and collective action within the scheme. This enhances the innovativeness in production and supply of products to their clients and improves their relationships in the value chain. More than acquiring soft skills through training and capacity building from social collaborations, farmers have been facilitated in organic farming by being provided with farm inputs such as seedlings, construction of farm facilities such as vanilla collection points, facilitation of vanilla processing and construction of vanilla drying centre. These were spoken by smallholders in the FGDs with Wanri Group who contend that: -

"…Red Cross signed a contract with the District Municipal Council to educate farmers for three years. They provided education, provided farmers with seedlings, constructed a collection point, trained farmers on vanilla processing and promised to find markets for farmers" (Wanri Group: Pos. 96 - 96)".

Similarly, various interventions enable smallholders to relate well with other actors in the value chain. With the provision of reliable seedlings for example, farmers get assured on availability of seeds and they can be sure to produce reliable quantities of vanilla. With reliable quantities of produce, farmers can be assured of a reliable supply of products to buyers after harvesting. In so doing they improve the relationships with such buyers in the value chain.

Moreover, the study findings show that the established link between farmer groups and the Government play roles in facilitating the supply chain relationships between smallholder farmers and other actors in the vanilla production value chain. A good example is what has been done by the District Authority through its Agricultural Extension Office. Formerly, the vanilla production and supply contractual agreements between farmers and their enablers were not clearly stipulated and were not understood by the farmers. In one way or another they were exploitative to the smallholder farmers. Given the situation, the supply chain relationships among the actors were impaired. The link between the farmers and the District Authority has harmonized the business relationships between smallholder organic farmers and their business partners/enablers NEI. This harmonization has been done through the intervention of the District Authority which reviewed contracts unfavorable to smallholder organic farmers. This resulted in the restoration of good supply chain relationships among these actors. The situation is further explained by the District Agricultural Officer who had this to say: -

"Just like NEI, at the beginning before the amendment of the contract they had entered with the smallholder farmers, the contract was in a way oppressive to the farmers. But using their groups, smallholder farmers were able to raise their voices. Changes to the contract were made and the price for vanilla could raise (Siha-District Agricultural Officer, Pos. 84)".

7.3.2 Social networks on smallholders' supply of vanilla products to market channels

As a component of smallholder farmers' market participation, supply of vanilla products to market channels is found to be influenced by the social networks that smallholders have established in the value chain. In FGDs with smallholders, many groups explained activities that they undertake with actors who support organic farming activities in the scheme. These activities are intended for improving the production and supply of vanilla products to market channels. Such activities

include proper cultivation of vanilla, encouraging production of vanilla in large quantities to meet the market demand and facilitation on the search for vanilla markets. Explaining the social links with an actor who facilitates and encourages farmers to produce vanilla in large quantities for meeting the market demand, a farmer in Wanri Group said that: -

"...The issue is like this; buyers wish to purchase vanilla in big quantities. So, this organization (NACTAD) teaches us not to cultivate only ten or twenty seedlings. Because a buyer from abroad would not come and purchase only one ton of vanilla. So, the main intention is to increase production (Wanri Group: Pos. 102-104)".

The large quantities of vanilla production that are realized through facilitation by such social collaborations are later supplied to market channels by smallholder farmers. In so doing, smallholder farmers participate in supplying products to intended organic markets.

Moreover, supply of vanilla products to market channels is found to be influenced by the established social networks that facilitate the search for vanilla markets for smallholder farmers. Some private agencies that collaborate with farmers see the challenges that vanilla farmers face in meeting reliable markets. Such actors either train farmers on strategies to search for markets or promise to link farmers to new markets that are within their networks. Such practices enable smallholder farmers to increase their capacity to supply the products to market channels and hence their market participation. Such a case was argued by a farmer in a group discussion with Koboko Group who explained that: -

"From NACTAD, we got a seminar on agribusiness. They educated us generally on how to strategically search for markets. These are concerned with providing general education, for instance education on searching for markets (Koboko B: Pos. 79 - 80)".

7.3.3 Social networks on smallholders' overcoming market barriers

It is found that smallholder organic farmers face many challenges that limit access to domestic and international markets. The common barriers that limit access to organic vanilla markets are production of low quality and below standard products and supply of uncertified products. The study found that smallholder vanilla farmers in the scheme are taking the initiative to overcome these barriers. This is influenced by the social networks that smallholders have collaborated with to enhance production of quality and standards for products and organic certification. Beyond working with other business partners such as NEI and UWAVAKI which facilitate certification, smallholders get training on the importance of undertaking initiatives to certify organic production.

Product certification will allow them to have choices on markets that they desire. Smallholders for example are linked to NACTAD, a social network that facilitates farmers training on production practices including certification. Explaining this role, famers for example claimed that: -

"The major intention of NACTAD is to train us farmers in our union so that we can get qualifying certificates that can enable us to penetrate the world markets ourselves (Wanri Group: Pos. 103)".

These explanations signify that smallholders' initiatives to overcome market barriers that result from lack of product certification are influenced by collaborations that smallholders have established within the value chain.

Moreover, the study found established social networks that foster sustainable farming practices such as using natural or organic fertilizers, production of organic manure and preservation of vegetation among many. These practices focus on enhancing organic farming. Smallholders' adoption of such practices enables them to meet organic farming requirements and so contribute in overcoming some of the market barriers that are strict on organic production and certification. Thus, the barriers that are based on organic and sustainable farming practices are overcome by the collaboration between social networks and smallholder farmers in the scheme. Justifying this, smallholder farmers claimed that: -

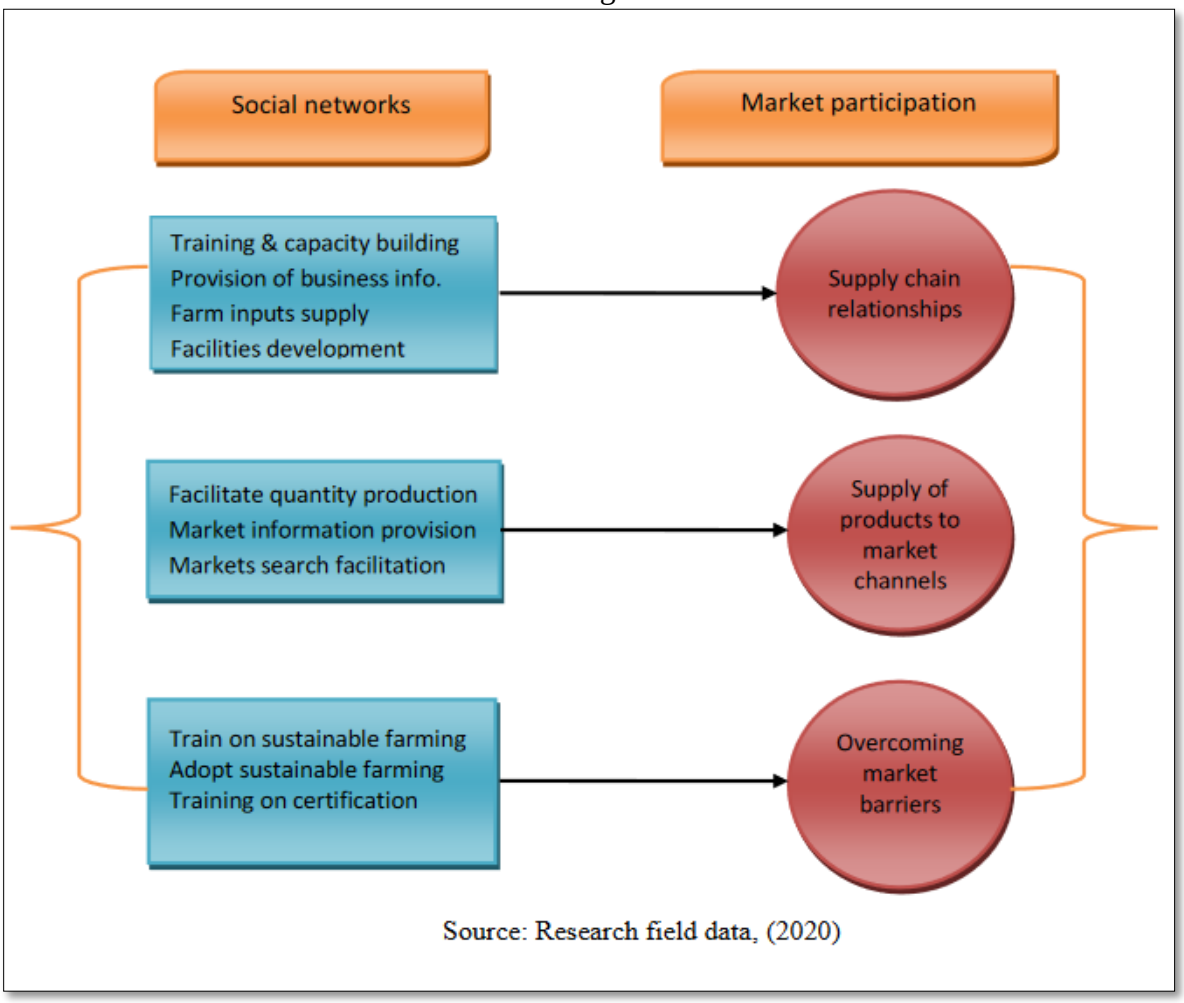
"FRORESTER, teaches us organic farming practices and the use of natural chemicals, preservation of natural vegetation and that we should all try to plant maize naturally in our farm plots. On the other hand, Enviro-care, helps us in organic farming practices like production of natural fertilizers (Wanri Group: Pos. 90 - 91)".

7.3.4 Summary of findings on the scheme

The above information explains the findings on social networks and market participation in the Organic Vanilla Farming Scheme. The findings indicate that supply chain relationships as a component of smallholders' market participation are influenced by the linkages that smallholders have established with NGOs and private initiatives that form their social networks. These agencies train farmers, supply farm inputs and develop farm facilities that enhance farmers capacities to produce and meet customer needs. In so doing they strengthen their relationships with other actors in the value chain. Supply of vanilla products to market channels as another component of smallholders' market participation is influenced by the activities that are undertaken within established social networks. Activities such as facilitation of vanilla production in large quantities and identification of vanilla markets that are done by the identified private initiatives and

organizations enhance smallholders' supply of products to market channels in the scheme. Moreover, smallholders' market participation through overcoming market barriers is influenced by social network support activities that address the main barriers related to low quality, low standards and non-certification of organic vanilla products in the value chain. Training and emphasis on the importance of product certification and training for adoption of sustainable farming practices, are done by the agencies that are linked to farmers. Such practices contribute to reducing the barriers that smallholders encounter when intending to supply organic vanilla products to markets. With these findings, we conclude that smallholders' market participation under the scheme is influenced by varieties of social networks that smallholders have established with various actors in the value chain. Figure 7.1 summarizes the elements that indicate smallholders' market participation and social networks in the scheme.

Figure 7. 1 Smallholders' market participation influenced by social networks in Organic Vanilla Farming Scheme



7.4 Social networks and market participation of smallholder farmers in Africado Organic Farming Scheme

Reflected under social network aspects, smallholders' market participation in the Africado Scheme was examined through the case of Kyelokamana and Naibili smallholder farmer groups. Qualitative data were gathered from focus group discussions with selected smallholder members of the group.

In searching for answers on how market participation of smallholder farmers is influenced by social networks, the study generally found smallholder farmer groups under the scheme to have very limited extensions in social networks and collaborations. Farmers explained an experience of establishing main links with only three networks which are mainly for agronomic services, research undertakings and training activities. The agencies that farmers identified to collaborate

with are the District Agricultural Extension Office, Tanzania Horticultural Association (TAHA) and a Kenyan Agricultural Research Institute. These agencies with their characteristics and activities are summarized in Table 7.2.

Table 7. 2 Social network agencies in Africado Scheme

No.	Social network	Form of agency	Linkage with farmer groups
1.	District Agricultural Extension Office	Public service office	Training and advisory services on agronomic practices
2.	Tanzania Horticultural Association (TAHA)	Association	Agronomic support, networking and marketing
3.	Kenyan Agricultural Research Institute	Institution	Research

Source: Research field data, (2020)

The forms of links that farmers establish with such agencies are formal and are approved by the authorities. The findings on smallholder farmers' market participation through supply chain relationships, supply of products to market channels and overcoming market barriers with respect to social networks under the scheme are further explained hereunder.

7.4.1 Social networks on smallholders' supply chain relationships, supply of products to market channels and overcoming market barriers

Due to smallholder farmers' limited extension of social networks and collaborations found in this scheme, smallholders' supply chain relationships, supply of products to market channels and overcoming market barriers are also found to be only slightly influenced by the established social networks in the scheme. In the FGDs, smallholder farmers explained they have limited collaborations with non-core business actors in the value chain. Africado, the main business actor primarily enhances the business activities and farmers have not further explored links and collaborations with other actors to improve their organic farming activities. Since the network agencies are found to be few and limited, the impacts of these links to the aspects of market participation are not accordingly categorized. Verifying the limited existence of social networks that smallholders have established in the scheme, a smallholder in an FGD with Kyelokamana Group explained that: -

"Concerning social networks, to tell the truth, we do not have many. Except for the Kenyans who came to buy our fruits. However, those who sold to these Kenyans were in trouble (Kyelokamana Group: Pos. 63 - 63)".

Activities that engage smallholder farmers and the social network agencies in the scheme include training services that farmers receive from TAHA and research undertakings from Kenya as was explained by a farmer from Naibili Group.

"We also got training from Tanzania Horticultural Association. Also, there are times Africado Company receive researchers from Nairobi who research on companies engaged in organic agricultural production (Naibili Group: 25 – 25)".

Despite the training and research activities that are explained to be undertaken by the agencies, the scope of such activities in the scheme is very limited. Due to the smaller scope in social network activities that smallholders have established in the scheme, the study cannot rely on the limited findings to conclude on how smallholders' market participation is influenced by these networks. With this understanding, the study findings indicate that smallholders' supply chain relationships, supply of products to market channels and overcoming market barriers are not significantly influenced by social networks that have been established by smallholder farmers in the scheme.

7.4.2 Summary of findings on the scheme

The findings above explain how smallholders' market participation is influenced by social networks in the Africado Farming Scheme. The study found a limited existence of social networks that smallholder farmers have established within the scheme. With the limited scope of the networks, the study found insignificant influences of smallholders' market participation due to social networks that exist in the scheme. With these findings, the study concludes that smallholders' market participation in the Africado Farming Scheme is not significantly influenced by the social networks that smallholder farmers have established.

7.5 Social networks and market participation of smallholder organic farmers under Sustainable Agriculture Tanzania (SAT) Organic Farming Scheme

A study was also undertaken on this scheme to examine how smallholder farmers' market participation is influenced by social networks that smallholder farmers groups have established in organic farming value chains. The study used qualitative data that were obtained through FGDs with farmers from six groups of Maendeleo, Masimbu, Muungano, Upatacho, Vijana Amkeni and Vijana Jitahidi which are all located in Mvomero and Morogoro districts in Morogoro Region. These farmer groups undertake organic farming activities under the facilitation of SAT. The study generally found smallholder farmer groups to have connections and collaborations with other

actors who facilitate undertaking of activities that contribute to the core farming business in the scheme. The study found Government institutions, NGOs, private initiatives, social farmer groups, social and economic platforms that collaborate with smallholder farmers in undertaking organic farming activities in the scheme. The commonly identified agencies and institutions that collaborate with smallholder farmers in the scheme include Sokoine University of Agriculture (SUA), Tanzania Organic Agriculture Movement (TOAM), Participatory Ecological Land Use Management (PELUM), Sabasaba, Nanenane and Zanzibar Exhibitions and platforms, organic farmers association and farmers social groups. A summary of these network agencies and their activities is indicated in Table 7.3.

The activities that are performed by these networks depend on the periodic targets of farmers. Farmers explained that many of these networks are formally established. The operations and activities undertaken between farmers and these networks are recognized by the respective authorities. The detailed findings explain how smallholders' market participation expressed in a form of supply chain relationships, supply of products to market channels and overcoming of market barriers, is influenced by the identified social networks.

Table 7. 3 Social network agencies in SAT Scheme

No.	Social network	Form of agency	Link with farmer groups
1.	Sokoine University of Agriculture (SUA)	Academic and research institution	Research and advisory services in agronomic practices
2.	Tanzania Organic Agriculture Movement (TOAM)	Organic farming initiative	Propagation and advisory services in organic farming practices
3.	Participatory Ecological Land Use Management (PELUM)	Non-Governmental Organization (NGO)	Facilitation of sustainable farming practices
4.	Sabasaba Exhibitions	Platform	Networking, marketing and selling
5.	Nanenane Exhibitions	Platform	Networking, marketing and selling
6.	Zanzibar Exhibitions	Platform	Networking, marketing and selling
7.	Organic farmers association	Association	Networking and marketing
8.	Farmers social groups	Group	Networking and marketing

Source: Research field data, (2020)

7.5.1 Social networks on smallholders' supply chain relationships in the scheme

In endeavors to expand their scopes of operation and meeting their organic farming targets, smallholders in the scheme are found to establish and develop collaborations with other actors in the value chain. As parts of social networks, these collaborations are found to contribute in strengthening supply relationships of smallholders with other actors in the organic farming value chain. Smallholder farmers are found to collaborate with institutions, agencies, social and farmer groups which mainly engage in agricultural research, agronomic services, training and knowledge exchange, information sharing and solving emergent problems. These activities play greater roles in strengthening farmers' relationships in the supply chain.

Farmers explained the existence of collaborations with a network of organic farming groups through which they share information and experiences on various farming practices and challenges that they face in the course of undertaking organic farming. These collaborations strengthen their relationships in the supply chain. Concerning these collaborations, an example is given by a farmer in Muungano Group who said that: -

"The social networks we have are those with fellow organic farming groups. We exchange farming skills, inform each other concerning prevailing issues on our farming practices and help each other in times of crisis. For instance, another group can ask our group to transport their products to SAT market or vice versa. We also have organic farmers social network group (WhatsApp group) in which every individual farmer has access to give information regarding farming practices (Muungano Group: Pos. 67 - 68)".

Moreover, smallholder farmers explain the existence of network activities that are attached to institutions which conduct research with farmers, promote environmental protection and sustainable farming practices. In this regard, farmers are found to be networked to institutions such as SUA which collaborates with them in undertaking research and providing advice on agronomic practices. Other institutions that farmers identify to be networked with in the scheme are TOAM and PELUM. These facilitate smallholders' adoption of organic and sustainable farming practices. Farmers also explained that these forms of network activities strengthen their relationships with other actors in the value chain. Speaking on how smallholder groups in the scheme are networked to institutions, farmers in Masimbu FGDs explained that: -

"With SUA, we collaborate in research. For instance, this year we are collaborating to find high quality organic maize seeds. They also told us that if we have any problems related to organic farming and we

need assistance then we should call them. We collaborate further with SUA in research, for instance, this year they came to conduct research on soil (Masimbu Station Group: Pos. 94 - 95)".

The identified forms of collaboration that farmers establish with other farmer groups and research institutions give the groups wide scope for extending their capacities in organic farming and marketing activities. This strengthens smallholders' relationships with other actors within the value chain and therefore their participation in organic farming markets under the scheme is enhanced.

7.5.2 Social networks on smallholders' supply of organic products to market channels

Smallholder farmer groups under the SAT organic farming scheme supply a variety of organic products to various market channels. While the main market is SAT itself, other products are supplied to domestic markets in the region and in Dar es Salaam. The supply of organic products does not always go smoothly for farmers. There are challenges that need smallholders to continually strive to extend their capacities and abilities so that they can supply quality products in good quantity and on time. Smallholders extend their scope in this way as markets demand. To attain this, smallholder farmer groups adopt various means including formal products selling to business partners and using supply networks that they have established.

Findings indicate that smallholders' supply of organic products to markets is influenced by platforms that smallholders join and use during organic farming undertakings. Farmers explained they use the annual Sabasaba Exhibitions, Nanenane Exhibitions and Zanzibar Exhibitions which they attend, and where they market and sell their products. They use the platforms to capture new business ideas, new markets, new customers and new partners.

"…we also attend exhibitions. For instance, this year, we were requested to participate in Nanenane exhibitions where we had a slot. What we learnt and desired from the exhibition is that, for instance, currently we do not have a logo. So, we have learnt that it is important to have a logo which will help us to advertise our products. We have also learnt the importance of value addition, for instance grinding products, packing and branding just like other farmers do (Masimbu Station Group: Pos. 96 - 98)".

These exhibitions are normally bigger, international and bring together farmers, buyers, customers and other actors from different countries. They create reliable networks for farmers to sell their products, expand their networks and markets. Smallholder farmers' use of these platforms contributes to improving and expanding the scope of supplying products into market channels. For

example, farmers in Maendeleo Group explained that, using exhibitions, they managed to get introduced to a Supermarket in Dar es Salaam owned by Jessica. Until now the group has been supplying vegetables and fruits to this supermarket. Moreover, findings indicate that supply of products to market channels under SAT is influenced by the union of farmer groups which farmers have established in the scheme. This entails that instead of working alone as independent groups under the scheme, smallholders extend their connections to other groups and therefore form a bigger network of social groups of farmers within the scheme. Explaining the existence of such groups, farmers in Vijana Amkeni Group said that: -

"We also cooperate with other groups, and just recently we have established a union of 36 groups so we can cooperate in managing selling of our spices. So, we came together and selected leaders for that union in which I was selected to be the chairman. We basically established this union so we can sell our products collectively. Because buyers' intention is to purchase in large quantity like tons, a supply which cannot be done by individual persons or groups (Vijana Amkeni Group:Pos. 40 - 40)".

As contended by farmers, social groups and unions are formed for the purposes of collaboration in addressing various challenges in organic farming. They are formed also for uniting in tapping various opportunities and finding common means to seek for markets and supply of products in big quantities as other markets require. Since the groups are networked, they share the experience and link each other to markets and they face together the challenges such as the need to supply in large quantities. When they are networked, they can jointly collect their products and supply in needed quantities as markets demand. In so doing, the supply of products to market channels is facilitated by the networked groups.

7.5.3 Social networks on smallholders' overcoming of market barriers

Smallholder farmers' effective participation in markets is found to be constrained by factors such as low product quality, low quantities of products, lack of technical and financial capacity for value addition, poor transportation and lack of reliable markets. To overcome these barriers, smallholder organic farmers adopt various approaches and means. Smallholders' creation and use of social networks is found to be practiced in the scheme. Smallholders' abilities to overcome market barriers as one of the market participation elements in the scheme is found to be influenced by the established social networks. Under this scheme, smallholder farmers explained how the collaborations with organizations that foster organic farming and sustainable farming practices

contribute to improve the compliance with the organic production standards. For example, smallholders identify their collaborations with TOAM and PELUM organizations and recognize the contribution of these organizations in enhancing the compliance with organic production standards. These organizations together with SAT usually help farmers with organic farming practices and inspections of farming activities to see if they are organically undertaken and if farmers follow the required standards of production.

Contributing on this idea, farmers in Muungano Group for example, explained how they collaborate with TOAM and how this collaboration facilitates smallholders' compliance with organic production standards.

"So, representatives from TOAM visit the farm plots in our Farmer Field School (FFS) and also visit individual farm plots to inspect if organic farming standards are being followed. Then they let us know of the groups which have followed the standards (Muungano Group: Pos. 42 - 42)".

The explained inspections and standards checking by the collaborating organizations help smallholders to take into consideration that they are cultivating organically, and they have to always follow the organic production standards. Thus, their produce meets organic standards. By doing that, smallholders contribute to supplying the market at the required quality.

7.5.4 Summary of findings on the scheme

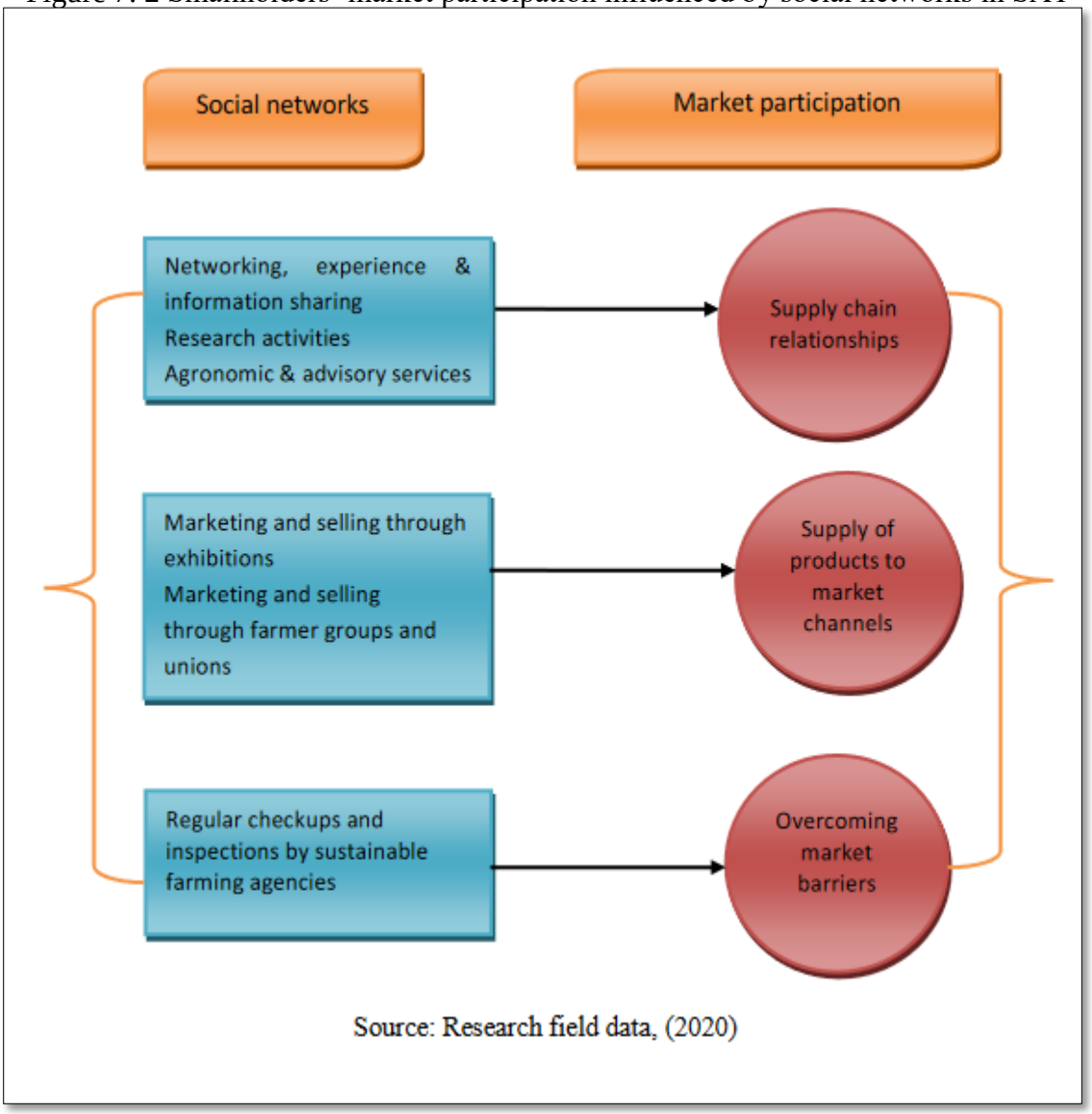
As a specific element of market participation, smallholders supply chain relationships are influenced by the network of groups that smallholders have joined in the scheme. Smallholders' sharing of organic farming experiences, challenges and market opportunities strengthen their relationship with other actors in the value chain. Smallholders' supply chain relationships are also influenced by the collaborations that smallholders have established with research, training and advisory institutions. These institutions partner with farmers in doing research, in providing agronomic services and in giving advice to expand smallholders' farming capacities. In so doing, farmers strengthen their relationships with other actors in the value chain.

Concerning the supply of organic horticultural products and spices into market channels, findings indicate that smallholders' market participation is influenced by these platforms. Smallholders' participation in platforms such as Sabasaba and Nanenane international agricultural exhibitions expose them to many networks and market opportunities that they use to supply and sell their products. This enhances smallholders' direct participation in organic markets. Supply of products

is also influenced by the social groups and unions that smallholders have joined. Through these unions and groups, smallholders get linked to a wider network of markets and use the unions to supply the products in large quantities as markets demand. Furthermore, findings indicate that smallholders' overcoming of market barriers in the scheme is influenced by the social networks that smallholders have created with organic and sustainable faming agencies. These agencies help farmers to comply with production quality and standards, aspects that help farmers to overcome the quality and standards barriers and so that they can access markets.

With all these specific views, the study concludes that smallholders' market participation is influenced by the social networks that smallholders have established with other farmer groups and with research, agronomic services providers and advisory institutions. Smallholders' market participation is also influenced by agricultural platforms where smallholders participate during their organic farming business. Smallholders' market participation is further influenced by organic and sustainable farming facilitation NGOs and agencies that smallholder farmers collaborate with. All these findings are summarized in Figure 7.2.

Figure 7. 2 Smallholders' market participation influenced by social networks in SAT



7.6 Cross-case reconciliation of findings

Based on the study findings from the three schemes, the strengths, common elements and differences that feature from the variables of the study can be identified to derive conclusions that are based on reconciled findings from schemes.

Looking on the independent findings from the schemes, the Organic Vanilla Farming and SAT Schemes have indicated smallholder market participation to be influenced by reliable social network activities that smallholders establish with other actors in the schemes. On the contrary, findings from the Africado Scheme indicate smallholders market participation to be insignificantly

influenced by social networks that smallholders have established with other actors in the scheme. In the latter scheme, smallholder farmers explained they have limited links and collaborations with social networks. With these findings, the study did not rely on the limited extent of collaborations in the scheme to conclude on its influence on smallholders' market participation.

Regarding the findings from the two schemes in which smallholders' market participation is influenced by social networks, there are similarities and variations in findings as far as the elements of market participation are concerned. In supply chain relationships, findings have indicated the existence of similar forms of social networks and activities that are explained to influence smallholders' market participation in the schemes. Research, training and capacity building activities that are facilitated in forms of research, guidance and provision of advice in agronomic practices are observed to prevail in the two schemes. These activities are done by training institutions and agencies such as the SUA and farmer support initiatives such as Red Cross, TOAM and PELUM. The collaborations between smallholders and these institutions and agencies lead into smallholder capacity enhancement in production, capacity in undertaking of the organic farming business and strengthening the smallholder-actor connections. Farming and production capacities, for example, get improved through such networks and these enable smallholders to produce abundantly to meet the buyers' demands. In so doing, smallholders expand their engagement with many actors and hence improve their supply chain relationships.

Also, the existence of collaborations that focus on enhancing smallholders' supply of products to market channels are indicated by promoting the adoption of marketing and selling of organic products in the schemes. Collaborations that enhance the supply of products to markets in the Vanilla Scheme for instance are helped by market searching and provision of market information to smallholders by NGOs and agencies. Similarly, in the SAT Scheme, marketing for organic products has been helped by networking activities which foster marketing and selling of products through exhibitions, platforms and social farmer groups and unions. So, networks that enhance smallholders' marketing and selling of products also hold strong representation in the schemes.

The overcoming of market barriers as another component to smallholders' market participation is influenced by social network activities in the schemes which improve quality. Others are promotion of production certification to farmers who are not yet certified in the scheme. On the SAT Scheme in which smallholder organic farming and production are organically certified, social network agencies facilitate organic and sustainable production activities by controlling of

production through regular checkups and inspections to emphasize organic production. All these practices indicate the existence of social networks that aim at enhancing organic and sustainable farming in the schemes.

Nevertheless, there are other social network activities that are undertaken differently in every scheme as indicated and they have relevant contributions in influencing smallholders' market participation. Such activities include social collaborations of smallholder farmer groups which in many cases share information, experiences and challenges on organic farming practices in their schemes. In such cases, smallholders express their views, problems and challenges and through the established group connections, they can find solutions to their challenges and therefore strengthen their relationships in the value chains. Others are collaborations that foster large-scale production of organic products to meet market demands, provision of business information, farm inputs and construction of farm facilities by farmer support activities such as NGOs. Despite them varying in nature in various schemes, they are relevant as collaborative activities, and they have roles to play in shaping smallholders' market participation.

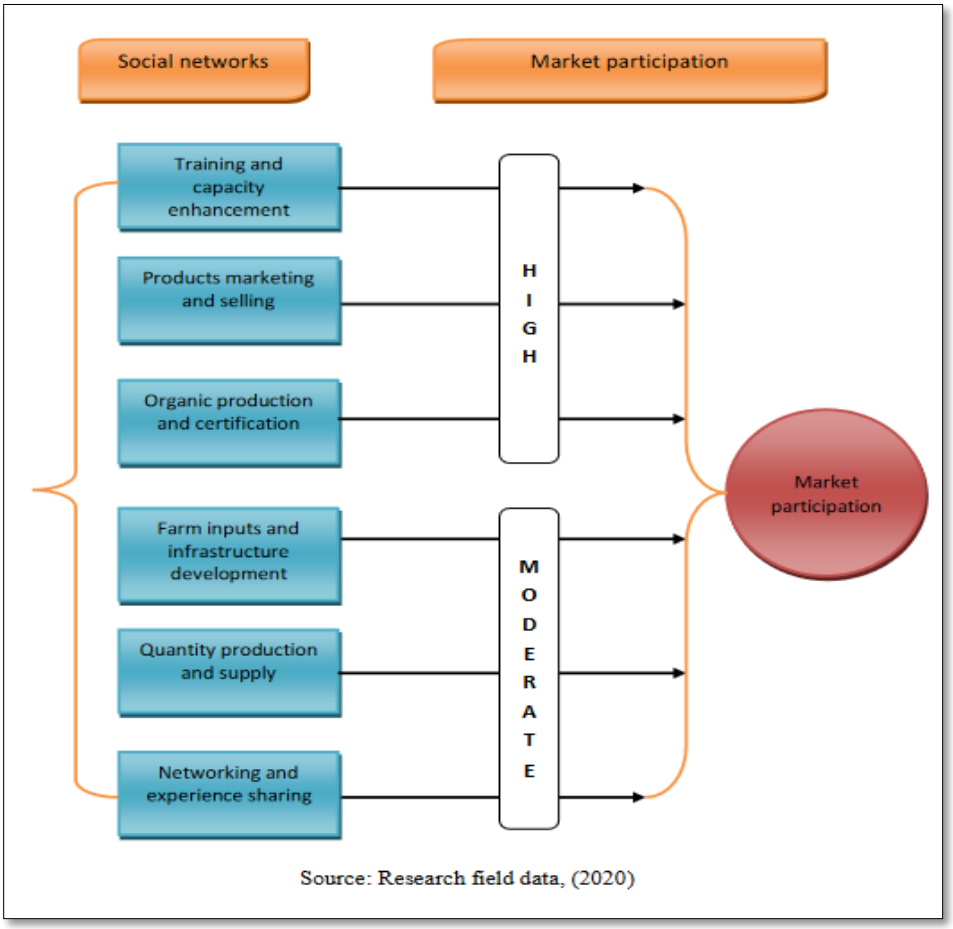
Therefore, being composed of supply chain relationships, supply of products to market channels and overcoming market barriers, the study concludes smallholders' market participation to be influenced by the following factors of social networks in schemes.

Smallholders' market participation is highly influenced by the training and capacity enhancement networks that smallholders have established with training and advisory institutions. Smallholders' market participation is highly influenced by collaborations that exist between smallholder farmers, agencies and farming platforms that foster market access facilitation, organic products marketing and organic products selling. Smallholders' market participation is highly influenced by smallholders networking activities with agencies that enhance organic, quality and standard vanilla production. Such activities aim at enhancing smallholders' adoption of sustainable farming practices, certification and controlling production by regular checkups and inspections to encourage organic production.

Smallholders' market participation is also found to be moderately influenced by network activities that support farmers through the provision farm inputs and construction of farm facilities such as vanilla collection centers and drying points. The participation is also found to be moderately influenced by social network agencies that facilitate organic farmers to produce in large quantities to meet the high demand of organic products by markets. Smallholders' market participation is

found to be moderately influenced by the collaborations that are created by a network of farmer groups in the schemes. Through the network, farmers get interlinked, share experiences and discuss the challenges that they encounter in organic farming. These reconciled findings on the research question are summarized in Figure 7.3.

Figure 7. 3 Smallholders' market participation influenced by social networks in organic farming schemes



7.6.1 Chapter summary

This chapter presented the findings on how smallholders' market participation explained through supply chain relationships, supply of products to market channels and through the overcoming of market barriers is influenced by social networks in smallholder organic farming in each scheme. The presentation has provided specific findings on the aspects of market participation in relation to the different variables of social networks that are identified in each scheme. Afterwards, the final derivation of the findings on every aspect of market participation and social networks in every

scheme was presented. Since every scheme has findings which in some ways are similar or different to that of other schemes, the chapter presented cross-case discussions which led to reconciled findings on smallholders' market participation and social networks for the entire study. The conclusion was that smallholders' market participation is highly influenced by the training and capacity enhancement networks, products marketing and selling networks and networks that foster organic production and certification in the schemes. The study also concluded that smallholders' market participation is moderately influenced by social networks that facilitate provision of farm inputs and development of farm facilities for smallholder organic farming. The participation is moderately influenced by collaborations with agencies that foster quantity production to meet market demands and with networks of farmer groups for interlinkage and experience sharing inorganic farming activities in the study area. The next chapter presents the summary of findings, conclusions, implications and policy recommendations.

8 CHAPTER EIGHT: SUMMARY OF FINDINGS, CONCLUSIONS, IMPLICATIONS AND POLICY RECOMMENDATIONS

8.1 Introduction

This chapter begins by presenting the summary of findings on the four specific research questions, each being linked to scholarly literature that supports or contradicts the findings. The general conclusion on the overall research question of the study follows. The implications and contributions of the study to theory, empirical knowledge and future research are then presented, and also the implications of the study findings on policy and practices are presented. Moreover, the chapter presents the policy recommendations on enhancing smallholder organic farmers' social capital and market participation and presents specific recommendations to smallholder organic farmers. Finally, the chapter highlights the limitations of the study.

8.2 The general and specific research inquiries that were undertaken by the study

This study focused on examining the role of social capital in influencing the participation of smallholder organic farmers in markets in Tanzania. The study realized this theme by undertaking an examination of organic farming schemes that engage smallholder farmers in the study area. This study was guided by the main research question about the role of social capital in influencing the market participation of smallholder organic farmers in Tanzania. To answer this main question, the study made investigations guided by specific questions. These questions inquired into the types of smallholder organic farming schemes that are practiced in the study area; the internal cooperation and external networks as social capital aspects and their influences on smallholder farmers' market participation in selected schemes in the study area. The last question made specific inquiries into the study's policy implications in supporting smallholders' social capital and market participation in the study area. Through this study, knowledge is added to the field of social capital and smallholder organic farmers' market participation.

8.3 Summary of findings and conclusion on the first research question

In an endeavor to find answers to the main theme, this study first sought to identify the types of organic farming activities that are found in the study area. Since the target of the study was smallholder organic farmers, it identified organic farming undertakings that engage smallholder organic farmers who are organized in groups. The study named these undertakings smallholder organic farming schemes. The study limited its scope to two regions of Kilimanjaro and Morogoro

in Tanzania. Due to the scarcity of organic farming undertakings that are organized in the proposed forms of schemes, the study focused on two organic farming schemes in the regions. The schemes were the Africado Organic Farming Scheme found in Kilimanjaro Region and the Sustainable Agriculture Tanzania (SAT) Farming Scheme that is found in Morogoro Region. However, during the actual realization of the study, another information-rich smallholder Organic Vanilla Farming Scheme was found in Siha District in Kilimanjaro Region. Therefore, this study found three types of smallholder organic farming scheme in the study area. These three schemes were adopted as cases for undertaking the study.

From the three organic farming schemes, the study found two of the schemes (the Organic Vanilla and Africado schemes) to have a similar mode of operating the business between smallholder organic farmers and agribusinesses. Smallholder organic farmer groups under these schemes are found to be publicly managed by umbrella unions (the UWAVAKI and the MUVIWAPASI) that serve as linkages to partnering agribusinesses and target markets for organic products. The Natural Extracts Industry (NEI) company features as a private vanilla processing business partner with smallholder organic vanilla farmer groups in the scheme. The company serves a current network of over 5000 vanilla farmers in Tanzania (https://www.nei-ltd.com/meet-our-chmpions). Despite many challenges that vanilla production faces, NEI tries to create an impactful and sustainable income for smallholder organic farmers through its business partners.

On the other hand, Africado is a private avocado producer and exporter company that forms business partnerships with smallholder organic avocado out-growers in the study area. Primarily, the company works with smallholder farmers on a business model to create opportunities for smallholder avocado farmers to generate reliable sources of income. The company fulfills this objective by connecting smallholder farmers to the export markets to capture the untapped avocado export market potential in Germany, Japan, Switzerland, Netherlands, China and the United Arab Emirates to mention a few. In this form of business, the company also facilitates smallholder avocado farmers' capacity building through the provision of training. Within these two schemes, the mode of partnership is founded purely on business objectives between agribusinesses and smallholder organic farmer groups.

Moreover, the study found another smallholder inclusive mode of organic farming under the SAT Organic Farming Scheme. Different from the two schemes that are found in Kilimanjaro, SAT is an NGO that practices production and marketing facilitation in smallholder organic farmer groups.

Without umbrella unions, farmers organized in groups partner directly with SAT as the farmer facilitator organization. SAT's primary objective is to foster sustainable smallholder organic farming and livelihoods. This is attained through farmers' adoption of sustainable farming activities from agro-ecological practices that are encouraged by SAT. It does that by playing the sustainable farming facilitation role through training and knowledge dissemination to smallholder farmer groups. Moreover, the scheme plays the market facilitation role for organic products from farmers. While acting as a market itself, the scheme promotes smallholders' organic production through sales to neighboring regions such as Kilimanjaro and Dar es Salaam.

Furthermore, SAT Scheme facilitates the adoption of the PGS for the certification of smallholder organic products in the area. For instance, by the year 2020, at least 694 farmers were trained on PGS and the East African Organic Product Standards (EAOPS) for organic certification of their products (SAT Report, 2020). In so doing, the organization plays a role in scaling up smallholder organic farmers' income through premium prices attached to organic products they sell. A good example was vindicated where at the organization, one bunch of carrots is sold up to a price of 1500Tshs. (0.7 USD), compared to a conventional bunch of carrots which is sold at 1000TShs. (0.45 USD) (SAT Officer, 2020).

The study also found smallholder farmers in all three schemes to be internally coordinated for better management of their organic farming and business undertakings. The study also found that, despite the existence of key agribusiness partners in all these schemes, there are other actors and stakeholders outside the schemes that have facilitation or business interests with the schemes. Actors include public and private institutions; District Authorities in Kilimanjaro and Morogoro regions; private development support agencies; donors and other private and development agencies. The Spanish Red Cross-Tanzania for example, was dedicated to improving food security and promoting sustainable rural development in Kilimanjaro Region through the cultivation of organic vanilla. The noticeable outcomes were observed in which at least 234 farmers have processed vanilla, generating an annual income increase of about $100 each between 2015 and 2018 (https://www.trcs.or.tz/media/attachments/2021/05/21/vanilla-project-infographic-report.pdf).

On the other hand, smallholder organic farmers' business undertakings in the schemes are well facilitated by social networks and platforms that collaborate with smallholder farmers. For example, the Sabasaba, the Nanenane, and Zanzibar exhibitions and platforms have created

business connections between smallholder organic farmers and markets from neighboring countries. These are identified in all the schemes, and they are the key sources of networks that enable smallholders to participate in markets for organic products. For example, through such platforms, wholesale customers from neighboring countries like Kenya and Uganda now collaborate with smallholder organic farmer groups from these schemes. All these characteristics portray forms of social cohesion and embeddedness that reflect social capital and a higher potential for smallholders' access and participation in markets for organic products.

8.4 Summary of findings and conclusion on the second research question

The second research question contributed to the general theme of the study by inquiring on how smallholders' market participation is influenced by internal cooperation as the social capital attribute in smallholder groups in organic farming schemes in the study area. The inquiry process and analysis of data classified the internal cooperation aspect into four categories. These are the mode of cooperation governance, the negotiation conditions, product quality management and gender concerns in smallholder groups. On the other hand, market participation was examined through smallholders' supply chain relationships in the value chain, smallholders' supply of organic products to market channels, and smallholders' overcoming of market barriers that are encountered in organic farming in the schemes.

Findings on the question from the three schemes indicate smallholders' market participation to be highly influenced by the formal governance mechanisms that are established in smallholder organic farmer groups. Smallholder organic farmer groups are found to be formally registered and have formal group membership, use formally recognized rules and by-laws, and use formal leadership and committees in organic farming undertakings. These mechanisms facilitate and give smallholders credibility through formal business relationships in the value chain. They also make smallholder groups attractive for value chain development interventions and hence positively contribute to smallholders' participation in organic farming markets.

These findings concur with what is argued by Meinshausen et al., (2019) and Kurtsal and Viaggi, (2020) who contended that formerly governed groups increase the potential for farmers to learn from others and hence engage in knowledge and experience sharing in a wider perspective. Moreover, findings correspond to the argument that formally established governance creates an enabling environment for smallholder farmers to access local and regional organic certification systems such as PGS and EAOPS, access to market information, access to organic markets, and to

establish good relationships with other actors in the value chain (Hlatshwayo et al., 2021; Carter & Hollinsworth, 2022). Also, noted along this line is the observation made by Benedek et al., (2018) that farmers' markets choice is stronger in farmers who work under cooperation and have specific investment plans for their farming development and for direct access to customers without using brokers. Similarly, Meinshausen et al., (2019) and Solfanell et al., (2021) commented that, for the possibility of groups to adopt group certification, they need to implement formal coordination mechanisms among members. Similarly, formally established farmer groups, legal capacity and central internal management are the prerequisites for group certification as per IFOAM, Fair-Trade, UTZ, the Rainforest Alliance and Global GAP. sustainability schemes. It is therefore concluded that formal governance mechanisms among smallholder organic farmer groups in the selected cases of organic farming schemes in the study area contribute to the formation of strong smallholder organic farmer groups with greater levels of participation in markets.

The findings of this study have also indicated that smallholders' market participation is highly but negatively influenced by the negotiation conditions that exist in the schemes. Unfavorable negotiation conditions, the limited negotiations to access markets for organic products, and the lack of clarity in setting and negotiating prices affect the motivation for smallholders to sell to the current markets. These conditions are found to exist and hinder smallholder organic farmers from participating in organic markets in the schemes. In line with these findings, Glavee-Geo, (2022) identified power imbalance to be an affecting factor in negotiations and relationships between small-scale producers and buyers. The unfavorable negotiation conditions that are found to exist in smallholder organic farming schemes also correspond to what Ncube, (2020), Meinshausen et al., (2019) and Ruml and Qaim, (2020) advocated. With these scholars, despite smallholders' potentials for increased productivity and income from collaborations with agribusinesses, existence of unfavorable negotiation conditions between the counterparts reduces smallholders' morale for continuing with such business endeavors. Unfair contractual agreements, lack of transparency and honesty on the market prices and burdensome transaction costs result in high rates of smallholders' dropout from such businesses.

Furthermore, the unfavorable negotiation conditions relate to the lack in balance of power between smallholders as sellers and agribusinesses as buyers (Cohen et al., 2022). These scholars call for smallholders' collective unionization or organization into groups to increase their capacity to

negotiate with the market economy. On the other hand, despite the energy invested by smallholder farmers on a certain crop as requested by the partnering company, a company may refuse to purchase the smallholder farmers' outputs due to low quality. Such scenarios were observed in the studied organic farming schemes and portray the poor negotiation conditions that retard business relationships. These conditions prevail and hinder smallholder organic farmers from participating in organic markets in the schemes.

The findings of this study further indicate smallholders' market participation is moderately influenced by the internal quality management mechanisms that smallholder farmer groups have deliberately established in the schemes. These findings explain that smallholder farmers' requirements to supply quality products to markets make their groups design deliberate mechanisms such as periodic visits and inspections of organic farms to meet the production and supply of organic products to market standards. Like other studies' findings, internal quality management exercised by farmer groups strengthen farming practices and improve skills and marketing capacity. These mechanisms contribute to encountering market barriers and hence participate in supplying the standard products to target markets in the schemes. Nevertheless, as also hinted by Meinshausen et al., (2019), internal quality management deployed by farmers in groups helps farmers to work together and learn from one another.

Furthermore, the findings indicate that smallholders' market participation is to a low degree influenced by the external quality management and gender concerns that were raised by some groups in the schemes. External quality management realized through the control of production standards and organic certification by agribusinesses contributes to determining the participation of smallholders in markets in the schemes. On the same point, other studies verified the role of certification on smallholders' organic farming and its various benefits such as market entry and revenue creation (Middendorp et al., 2020; Ibnu et al., 2018; Kleemann et al., 2014). The authors argued that smallholders' failure to certify production has been a barrier to participation in such markets. However, once smallholders' organic production is certified, they gain access to high-value export markets, an undertaking that leads to increased sales revenue.

On gender, however, disparities are encountered through social and traditional issues that deter women from participating in organic production and marketing. Findings reveal men in certain areas forbid their wives to participate in group farming activities, to travel for meetings and exhibitions and in other such similar practices that aim at fostering organic farming practices. Such

misconduct discourages women from participating in organic farming and hence influence smallholder farmers' market participation. Many of the literature that address gender influences on smallholders' market participation mostly identify gender inequalities observed in terms of accessing and controlling resources and in decision-making (De Pablo Valenciano et al., 2021; Gebre, 2021; Beuchelt, 2016; Muzari, 2016). The findings on gender concerns concur with the contentions that, despite women's participation in agricultural activities through their labor in marketing and processing, their decision-making as far as the use of agricultural resources is limited (Gebre, 2021; Abayelu et al., 2020). These gender inequalities impair full participation of women in agriculture more than their male counterparts.

Based on the varied responses as far as the research question of the study is concerned, this study concludes that smallholders' market participation is highly influenced by formal governance mechanisms and negotiation conditions that exist in the schemes. The study further concludes that smallholders' market participation is moderately influenced by the internal quality management and slightly influenced by the external quality management and gender concerns that exist in the schemes. With such variations in results from the cases, market participation of smallholder organic farmers is influenced by internal cooperation as a component of social capital in the studied schemes.

8.5 Summary of findings and conclusion on the third research question

The third research question inquired about how smallholder farmers' market participation is influenced by external networks as the social capital attribute in organic farming schemes in the study area. The study assessed smallholders' market participation through the derived variables which are smallholders' supply chain relationships in the value chain, smallholders' supply of organic products to market channels and smallholders' overcoming of market barriers in the schemes. The pre-defined social network elements include the forms of external networks, the governance of networks and the modes of information sharing. An assessment was done to determine how smallholder organic farmers' market participation is influenced by the established social networks in the selected organic farming schemes. Farmers' social networks have roles to play in enhancing sustainable agricultural development. The networks are effective tools for harnessing resilience and disseminating farming and market information among farmers, particularly in developing countries where rural education, extension, and agricultural information services are still underdeveloped (Giroux et al., 2023; Simon et al., 2021; Chaudhuri et al., 2020).

This study found smallholders' market participation to be highly influenced by the training and capacity-building networks that smallholders have established with training institutions. For example, smallholder organic farmers were linked with Red Cross Spain/Tanzania, NACTAD, PELUM, TAHA and District Agricultural Extension Offices. These networks provide training and advisory services and capacity building on agronomic practices, sustainable farming practices, and certification to smallholder farmers. These findings concur with Binder and Vogl, (2018) who reported on the important role of institutions such as NGOs in offering training and capacity building to smallholder organic farmers who desire to uplift their organic farming activities. The authors described the advantages that smallholders in Peru gained through the capacity-building programs while they were adopting PGS as one of the certification mechanisms to enable smallholders to scale up participation in organic farming.

The study also found that smallholders' market participation is highly influenced by established networks that advocate producers' high concern for market access, marketing and selling of organic products. Examples of domestic networking and selling platforms such as the Sabasaba, the Nanenane, and Zanzibar Exhibitions contribute in exposing smallholder farmers to prospective markets for their organic products. In these platforms, farmers come across and learn from the experiences and challenges of other producers. Also, social networks that are established in the schemes provide opportunities for smallholder farmers to extend wings beyond local and national boundaries for showcasing their products. For example, in the year 2018, farmers under SAT Scheme had an opportunity to attend international agricultural exhibitions in Italy where they showcased their organic products. Being organized in groups, the identified market access networks in the schemes foster easy information sharing, and technical knowledge dissemination, to expose farmers to improved market channels for organic products. The concept of networks as sources of information sharing for smallholders' market participation is also highlighted by Mubofu and Elia, (2017). The researchers recognized the efforts that the Ministry of Agriculture in Tanzania is setting in supporting information sharing to farmers through various agricultural shows and networks such as Sabasaba and Nanenane Exhibitions.

Smallholders' market participation is also highly influenced by network activities that enhance standard compliance and quality organic production through sustainable farming practices, certification and controlling the production by regular checkups and inspections to encourage organic production. This finding concurs with the Roundtable on Sustainable Palm Oil (RSPO)

network that is highlighted by Aziz et al., (2021). The establishment of this network led many smallholder palm oil farmers in Malaysia for example, to use the Malaysian Sustainable Palm Oil (MSPO) Authority to certify palm oil production. The MSPO stems from the RSPO network. From this roundtable network, all palm oil farmers in Malaysia were advised to use the authority in certifying palm oil production.

This study also found smallholders' market participation to be moderately influenced by collaboration activities that support smallholders through the provision of farm inputs and the construction of farm facilities. This finding concurs with what Kilelu et al., (2017) provided on an integrated hub model that is established for smallholder dairy farmers in Kenya to support their integration into agri-food value chains. Through the hub model, smallholders are enabled to access advisory services, farm inputs, supplies and market access services.

Smallholders' market participation is also found to be moderately influenced by networks that facilitate organic production in large quantities to meet the high demand for organic products by markets. Concurring with this orientation, Sumer and Toktas, (2019) proposed a model for predicting the organic production quantity per year in Turkey to meet the demands for foreign exports of organic products. In so doing the massive production of organic products will be contributing to meeting the human health and environmental needs of society.

Lastly, the study found that smallholders' market participation is moderately influenced by the collaborations of farmer groups in which they get interlinked, share experiences and discuss the challenges encountered while undertaking organic farming and in accessing markets for their organic produce and products. This finding falls in line with a network that integrates smallholder organic pineapple farmers and other actors in Uganda as reported by Kalibwani et al., (2018). With them, smallholder organic pineapple farmers are organized and interlinked within a network known as the Ntungamo Organic Product Innovation Platform (NOPIP). Smallholder organic pineapple farmers linked under this network get opportunities to upgrade their organic farming skills and knowledge among others.

With these findings on the specific research question, the study concludes that there are variations between the high and moderate extents to which social networks influence smallholders' market participation in the schemes. Therefore, smallholders' market participation appears to be highly influenced by social networks that focus on training and capacity building, market access, marketing and selling of products, and sustainable farming practices. On the other hand,

smallholders' market participation is moderately influenced by networks that are centered around the provision of farm inputs and facilities, promoting production in large quantities to meet market demands and farmer groups' interlinkage and experience sharing. Nevertheless, the variations in influences indicate how smallholders' market participation is influenced by social networks in the schemes found in the study area.

8.6 Summary of findings and conclusion on the fourth research question

The fourth specific research question of this study aimed at expounding the policy and strategic recommendations. These are meant to support smallholder organic farmers' social capital for enhanced market participation. Responding to this question, the study referred to some of the opinions from key informants that were captured from interviews and focus group discussions. The opinions were thematically assessed, and the relevant ones were proposed as recommendations from the study. Other recommendations are made from the findings to the other specific questions of the study. The key themes from the findings were captured and from these, respective recommendations have been made. On policy recommendations, the study made recommendations on the formal governance and formalization of negotiations and contracting in smallholder organic farmer groups that partner with agribusinesses. The study also recommends policy to strengthen smallholder organic certification. It also recommends a policy that deliberates and prioritizes the inclusion of smallholder organic farmers in market access networks and in accessing services from agricultural support institutions and agencies.

With respect to smallholder organic farmers and groups, the study recommends that organic farming groups adopt formal governance mechanisms to enhance credibility with partners. This will also help to improve their resilience in overcoming stress and shocks associated with organic production and help to access other resources such as financial resources for improved organic production and access to markets. The study further recommends smallholder organic farmers to take deliberate initiatives for capacity building in negotiations and contracting. Further recommendations are made for smallholder organic farmers to seek domestic or international certifiers for their products. The study recommends that smallholder organic farmers should forego the traditions that discourage and prohibit women's freedom to equally associate and participate in organic farming. The study further recommends that smallholder organic farmers should extend their associations with organizations and institutions that serve as networks for production and market access.

8.7 General conclusion on the main theme of the study

The general research question of this study sought to identify the role of social capital in influencing smallholder organic farmers' participation in organic farming markets in the study area. Some of the findings that provide input on the main research question are based on: How smallholder organic farmers' market participation is influenced by the internal cooperation of smallholders in groups in the schemes. The other findings are based on how smallholder organic farmers' market participation is influenced by the social networks of smallholder farmer groups in the schemes. With regards to smallholders' market participation being influenced by internal cooperation, variations of positive and negative influences were found in the study. Positive influences emerge from formal governance mechanisms and internal and external quality management mechanisms in groups. Negative influences on the other hand emerge from unfavorable negotiation conditions and gender concerns in groups. With regards to social networks, various sorts of collaborations that farmer groups access through training and capacity building, product marketing and selling, sustainable farming practices, farm inputs, infrastructure development and group linkages are identified. These form smallholder organic farmers' social networks and they contribute to influencing their market participation. Looking at these ranges of factors, whether positive or negative, they indicate the roles that are played in influencing smallholder organic farmers' market participation.

From the understanding of the main research question, from the assessments and integration of the positive and negative factors, this study makes a general conclusion as follows. The positive social capital practices such as cooperation governance, product quality management mechanisms and all forms of social networks that exist in smallholder organic farmer groups enhance smallholders to participate in markets. On the other hand, the negative social capital elements such as unfavorable negotiation conditions and gender concerns that exist in smallholder organic farmer groups in the schemes discourage smallholders from participating in markets. Based on the variations in findings indicated by the study, smallholder organic farmers' disposition to participate in organic farming markets is influenced by the forms of social capital practices that exist in farmer groups in the schemes. With this understanding, social capital in smallholder organic farmer groups in the schemes is found to play a significant role in determining smallholder organic farmers' market participation in the study area.

8.8 Implications of the study

The implications of this study are reflected in various aspects which include the implications for theoretical foundations, implications for empirical research, implications for policy and practices and for future research. These aspects are detailed as follows.

8.8.1 Implications of the study for the existing theoretical foundations

When this study was developing guided theoretical foundations, it referred to several theories and frameworks. One of the selected frameworks is the Sustainable Livelihood Framework (SLF). The Framework is used as a tool for providing guidance in analyses of livelihood strategies in vulnerable communities to address poverty (Adato & Dick, 2002; Krants, 2001). Concepts of the SLF were applied in this study by depicting the ways in which smallholder organic farmers make use of their assets, resources and capabilities to overcome the vulnerability stresses and shocks and ultimately sustain livelihoods. The other theory on which this study is founded is the Social Capital Theory (SCT). This theory emphasizes the relationships among individuals and how the investment in social relations plays a significant role in the success of groupings and working together of individuals (Rivera et al., 2018; Lin, 2008; Lin, 2001). The application of SCT was observed through smallholder organic farmers' ways of cooperating and social networking to improve their organic production, overcome challenges associated with organic practices and attain more access to organic markets.

As adopted in this study, the two theories have revealed the relevance of their applications in research work with the aim of finding solutions to the social-economic problems of deprived societies. Literature has not yet provided prior studies that have completely investigated smallholders' social capital and organic farmers' market participation that are based on the inquiries and analyses on the two theories. The contribution of the study in the investigation by using the two theories is an extension of the applications of these theories and their foundations.

Moreover, following the literature review, the study developed the conceptual framework for guiding the operationalization of the research questions. These include variables of cooperation governance mechanisms, negotiation conditions and product quality management mechanisms for internal cooperation. Others include forms of social networks, governance of networks and information sharing mechanisms as variables for social networks. These were reflected in the three dependent variables of smallholders' supply chain relationships, smallholders' supply of organic products to market channels, and smallholders' overcoming of market barriers for market

participation. The SLF and SCT also added value to the formulation of the conceptual framework. Future scholarly works that intend to research themes similar or related to social capital and smallholders' market participation can form bases of reference from the derived conceptualization. Therefore, making references to the formulated conceptual framework adds value to the literature and to the existing theoretical foundations.

8.8.2 Implications of the study to the empirical research

The study has provided a wider knowledge of the social capital and market participation of smallholder organic farmers in selected schemes in the study area. In doing this, the study has dug deeper into the variables of social capital which are internal cooperation and social networks. These variables have been linked to the variables of market participation which are smallholders' supply chain relationships, smallholders' supply of organic products to market channels, and smallholders' overcoming of market barriers. The knowledge created on the research aspects and the entire interrelationships between variables adds value to the body of empirical evidence. Scholars who intend to research either of the variables can refer to the research evidence provided by this study. For example, any scholarly research that will be intending to research internal cooperation in smallholder organic farming can borrow the knowledge on internal cooperation practices from the schemes of this study to add empirical insights into what the intended research will be exploring.

Moreover, the study has come up with findings that are related to social capital and smallholder organic farmers' market participation. These findings also provide additional knowledge to the empirical body of research undertakings. Research that intends to examine factors that are related to social capital and smallholder organic farmers' market participation and any other interesting studies can fill the gaps by referring to the empirical literature that is formed by this study. For example, the study findings on the existence of unfavorable business negotiation conditions in the organic farming schemes and its influences on smallholders' market participation can now be used to inform research that will examine the role of negotiation mechanisms on influencing smallholders' market participation.

8.8.3 Implications of the study for policy and practices

The findings of this study can inform policy makers and other related stakeholders. These groups of actors in one way or another contribute to improving the participation of smallholder organic

farmers to access markets and enhance their individual growth and the growth of the entire sector. This study makes recommendations that inform decision-makers in making policy actions that intend to improve smallholder organic farmers' engagement in agribusiness. For example, the study has identified that mechanisms for the external quality management of smallholder organic farming to foster compliance with quality and standards are essential for improving the performance of smallholder organic farming practices. To meet compliance, the need for certification of smallholder organic farming production continues to be important. However, adoption of the certification processes and practices for smallholders have continued to be low. The role of decision-makers in intervening in the formulation of policies that foster the certification processes for smallholder organic farming is recommended (e.g. use of PGS). With such recommendations, the study provides knowledge that informs decision-makers to influence policy decisions.

Additionally, the study has come out with findings that inform smallholder organic farmers themselves and other organic farming stakeholders (practitioners, agribusinesses, funders, partner organizations, international agencies, NGOs) for making decisions. These findings are aligned with recommendations that aim at improving the framing and strengthening of smallholder organic farmers' social capital for improved market participation. For instance, the question of formal governance of smallholder organic farmer groups has been found to have a strong influence on smallholder organic farmers' market participation. Institutionalized and formally managed farmer groups reflect high credibility to agribusiness and other actors. This is one of the strong contributing factors to accessing business relationships and markets for organic products. The study suggests that all smallholder organic farmer groups should be formed and operated by using formal and institutional mechanisms to make them credible for partnering with agribusinesses and other stakeholders. Such recommendations to smallholder organic farmers and other stakeholders provide bases for practicing meaningful organic farming activities that contribute to the growth of individual farmers and the entire organic farming subsector.

8.8.4 Implications of the study for future research

The findings of the study have also added a body of knowledge to the world of research. However, the study did not exhaust all the elements that revolve around the constructs of the study, leaving room for the future work of other researchers. The social capital and market participation theme that was researched focused on the smallholder organic farming sub-sector with the intention of

seeing the contributing factors to its performance and growth. The question has been on the contributing role of social capital in influencing smallholder group-based organic farming access to markets. The covered scope of organic farming does not encompass all social capital aspects and characteristics. The study can still be expanded further to other sub-sectors of agriculture such as conventional farming, horticulture, perishable crops, commercial crops or specific crops that work with smallholder farmer groups. In these sub-sectors, there can be the existence of other social capital characteristics that differ from those found in organic farming and call for more interesting studies. Investigations can be done to identify the contribution of social capital in forming strong and empowered groups and how these conditions influence the overall functioning of such groups in agribusinesses.

Social capital in the context of this study has been explained and explored through internal cooperation and social networks. These aspects have mainly been explained in the forms of structures, institutional arrangements and governance mechanisms as portrayed in the conceptual models of the study and as contended in literature (Bongomin et al., 2017; Prell, 2012; Van der Ploeg & Marsden, 2008; Fafchamps & Minten, 2002; Putnam, 2001; Bourdieu, 1986). Due to the wide scope of conceptualization and understanding that social capital provides, other research can be undertaken within the depths of social capital-related concepts. Such concepts include social norms and informal rules, trust, a sense of community, reciprocity, culture and tradition (Rivera et al., 2018; Snider et al., 2017; Midgley, 2014; Alexiv & Penov, 2006; Prusak & Cohen, 2001; Paldam, 2000; Fukuyama, 1995). Scholars may choose to make in-depth inquiries into any of the identified concepts and examine their contribution in shaping smallholder grouping and the overall participation in organic farming or any other forms of agribusiness.

Literature provides that social capital elements are well studied by using qualitative designs (Putnam, 2001; Coleman**,** 1988; Bourdieu, 1986). Nonetheless, this understanding does not limit other researchers from venturing into quantitative undertakings to expound on the relationships between smallholder organic farmers' social capital and market participation. Market participation aspects such as the extent of smallholders' relationships with other actors in supply chains and the quantities of organic products that are supplied to markets through social capital can be as well expounded quantitatively. Such quantitative aspects have not been captured by this study due to the design it adopted. This understanding implies possible alternative research options under which researchers can propose further study.

8.9 Recommendations to improve smallholders' social capital and market participation

General findings have indicated that smallholder organic farmers' market participation is influenced by the social capital that is created by smallholder farmers in their schemes. Despite the variations, the findings have set foundations for recommending the improvement of smallholder organic farmers' market participation through social capital. After classifications of the findings, some recommendations are meant for policy actions and other recommendations are directed to smallholder organic farmers. The study thus recommends policy actions to policy makers and recommends measures that can be taken by smallholder organic farmers to improve market participation.

8.9.1 Recommendations to policy makers

The study has found smallholder organic farmers' market participation to be strongly influenced by the formal governance mechanisms that smallholders adopt in their organic farming undertakings. Structured governance of groups plays a great role in the legitimization of groups, an aspect that fosters group links to organic farming businesses and markets. However, despite the existence of many farmer groups that have been formalized to Agricultural Markets and Cooperative Societies (AMCOS) in various sectors in Tanzania (Anania & Nade, 2020; Mapunda et al., 2019; Uronu & Ndiege, 2018), many smallholder organic farmer groups are still informal, not structured and not formally recognized by agribusinesses. Due to the strength that the formal group governance mechanism has been shown to possess in smallholder organic farmer groups, this study recommends the formulation of policies that mandate formal structuring and governance of smallholder organic farmer groups. Smallholder organic farmers, especially those that work with agribusiness need to be organized in groups and unions such as AMCOS and these are to be formally governed. Formalized governance of smallholder organic farmer groups through institutional arrangements such as AMCOS gives them credibility to partner with agribusinesses. Such practices also increase the potential for smallholder organic farmers to improve collective action, build trust and create value networks and strategic collaborations (Goswami & Deka, 2022). These practices expose smallholders to more markets through sustainable and inclusive value chains. Moreover, the formulation of such policies can be triggered by the development of the Organic Agriculture Legislation that is not yet developed in Tanzania unlike many African countries which already have them (FiBL & IFOAM, 2021). All these contribute to the formulation of formally structured and governed organic farmer groups for improved market participation.

This study also found smallholder organic farmers' market participation to be strongly but negatively influenced by the existing unfavorable negotiation conditions between smallholders and agribusiness partners in the organic production value chain in the schemes. The unfavorable negotiations were observed in the lack of clear contractual arrangements, lack of transparency in price-setting mechanisms with agribusiness partners, lack of clear terms on responsibilities to handle transaction costs, and negotiations in accessing markets for organic produce.

Smallholder farmer groups' failure to sustain negotiations with agribusinesses reduces morale for smallholders' participation in organic production and marketing of organic products. Smallholder organic farmer groups lack the capacity to negotiate and are not well versed with the ability to earmark prices and market opportunities upon which to negotiate. Many find themselves falling into contractual deals that do not favor their business undertakings with agribusinesses.

Similarly, smallholder organic farmers are affected by market-oriented constraints such as lack of knowledge of existing niche organic markets and problems related to accessing local, national and international markets (Thamaga-Chitja & Hendriks, 2008). From these findings, this study recommends the formulation of policies that formalize and guide negotiations and contracting in smallholder organic farmer groups that partner with agribusinesses. The formulation of such policies will assist smallholder organic farmers not to fall into the trap of unfavorable prices, markets and contract negotiations.

Moreover, this study found smallholder organic farmers' market participation to be influenced by the external quality management mechanisms in smallholder organic farming schemes. This means that external mechanisms that focus on improving compliance to organic farming standards outside the organic farmer groups are very essential. With this understanding, this study proposes that policy decision makers should enable, strengthen and extend the role of organic certification in Tanzania. Despite the existence of organic farming certification agencies at global, regional and domestic levels, the formalization of organic farming initiatives and certification of organic farming in Tanzania is still low and needs to be given more support and emphasis. The set-up for organic farming in developing countries including Tanzania is oriented toward certification practices and the application of certification standards that are globally formulated and are basically meant to cater for consumer needs in the developed economies. These organic certification practices are oriented in a top-down process, not smallholder inclusive and do not

consider the regional and local ecological and agronomic setting within which smallholder organic farming is undertaken (Bottazzi et al., 2020; Nelson et al., 2010; Gonzalez & Nigh, 2005).

The development of the EAOPS, and the allowance of PGS quality assurance within this standard should be used to the benefit of smallholder farmer groups. This study recommends the formulation of certification policies and guidelines that take into consideration the local settings in which smallholder organic farming practices are undertaken. In response, smallholder organic farmers will be able to adopt the certification practices as they will be more considerate of the existing local settings. This will enhance the participation of smallholder organic farmers in markets and the organic farming business.

Furthermore, the study found that smallholder organic farmers' market participation is influenced by the existence of market access networks such as domestic and international exhibitions, platforms and forums. These are windows through which smallholder farmers get exposure to showcase their activities and products and earmark or be earmarked by some new market networks. However, smallholders' access to these networks is not easy and they need to be facilitated. This study, therefore, recommends that policy organs should create an enabling environment that includes smallholder organic farmers in such networks. For example, whenever international platforms for showcasing organic products exist, the responsible organs need to be guided by policy to give more opportunities for many smallholder organic farmer groups to be included. That will increase the opportunities for smallholders to participate in such networks where they meet global and regional markets. Where possible the policy should stipulate subsidizing the costs that smallholder organic farmers will incur to access such network opportunities.

Additionally, the study has found smallholder organic farmers' market participation to be influenced by social networks that foster the provision of farm inputs and facilities and organic production in large quantities for both domestic and international markets. With the importance of these networks, this study recommends that policy should stipulate institutions, agencies and bodies that support agricultural undertakings to give priority to the inclusion of smallholder organic farmers in their initiatives. Such institutions for example include the Tanzania Agricultural Development Bank (TADB), public and private commercial banks such as the National Microfinance Bank (NMB) and Cooperatives Rural Development Bank (CRDB) that support farmers and agribusiness, agencies that promote irrigation farming and provision of farm loans, facilities and services. Where the burdens of including smallholder organic farmers are heavy, the

study recommends policy to incentivize or subsidize some services to accommodate smallholder organic farmers. Practicing such policies will enable many smallholder organic farmers to be networked and included through collaborators and ultimately lead to considerable participation in domestic and international markets.

8.9.2 Recommendations to smallholder organic farmers

From the overall findings of this study, there are areas in which specific recommendations are made for smallholder organic farmers to enhance social capital functioning and market participation. Findings have indicated that institutionalization and formal governance of smallholder farmer groups are vital elements for improving the performance of organic farming activities and groups' collaborations with agribusinesses. With this understanding, this study recommends that smallholder organic farmers who are working in groups or intend to work in groups should be organized in formal groups that are governed by farmer unions or associations. The formally recognized groups increase credibility to partner with agribusinesses. Formalized organic farmer groups will have reliable business collaborations and partnerships and create strong links to markets for their organic products.

As the findings further indicate, smallholder organic farmer groups are limited in negotiations with partner agribusinesses as far as the prices and market opportunities and transaction costs are concerned. The result of this situation is that smallholder organic farmers often get into contracts that do not favor their business. The study recommends that smallholder organic farmers take deliberate initiatives for building capacities in negotiations in their groups and unions. In line with this, smallholder farmers are urged to enter agribusiness contracts that are clearly defined. Where possible, smallholder organic farmers can take contracts with agribusiness by consulting government authorities or other legal consulting firms for effective contracting and business negotiations.

Quality management of smallholder organic farming by external agencies is a practice that has also been found in this study. Due to the nature of organic farming, the control of production to assure compliance with the quality and standards of products is an undertaking that every organic farmer needs to undergo. This implies certification of organic farming by recognized certifiers. Despite the challenges and costly processes that are incurred to attain organic certification, this study recommends for smallholder organic farmers to take the initiative to seek domestic or international certifiers for their products. They should play their role in seeking government

assistance in the facilitation of certification of organic farming through various approaches such as PGS.

Despite being on a low scale, findings have indicated that smallholders' market participation is influenced by gender biases. There are experiences of women being denied their freedom to participate in smallholder organic farming activities. For example, some women are forbidden by their husbands to go to meetings, travel for exhibitions and other similar restrictions. These behaviors discourage women from engaging in group-based organic farming activities. Based on this experience, the study recommends that smallholder organic farmers should discourage those traditional, social and cultural behaviors that are gender biased. Smallholder organic farmers should forego the traditions that discourage and forbid women from associating and participating equally in all organic farming endeavors.

Findings have also indicated that smallholder organic farmers' market participation is influenced by non-business collaborations with institutions and organizations that serve as social networks for organic farmer groups. These networks facilitate training and capacity building for farmers, facilitate market access and product selling, access to inputs, farm facilities and services, and facilitate management of quality and quantity of organic production. Despite these networks being not for business, their contributions to organic farmer groups have significant impacts on organic farming business undertakings. With this understanding, this study recommends for smallholder organic farmers to strengthen their associations with various organizations and institutions. By so doing, they get access to non-business assistance that can serve as networks for improving organic farming businesses.

8.9.3 Recommendation to other organic farming stakeholders and practitioners

The study findings have shown poor negotiation conditions between agribusinesses and smallholder organic farmers that have negative influence on smallholder organic farmers market participation. The study recommends agribusinesses to create conducive environment for equitable negotiation grounds between them and smallholder organic farmers. Agribusinesses are urged to pay attention to the creation of equitable negotiations between them and smallholders on pricing and transaction costs aspects.

The study also recommends to donors and funders who fund research in smallholder farming. It urges for them to direct funding on research activities and training that intend to improve not only

agronomic practices, but also specifically to improve smallholder organic farmers' skills and capacity for markets access.

Moreover, social networks have been observed to be significant in fostering smallholder farmers' participation in the organic farming value chain. The study recommends for NGOs, partner organizations and international agencies that have vested interest in organic farming to assist smallholders to secure networks that facilitate access to organic certification, quality organic production, quantity improvements and market access. Such roles are like linking and enabling partnerships between smallholders to international certifiers and other value chain participants and promoters of markets for organic products.

8.10 Limitations to the study

This study was subjected to several limitations, some emanating from the methodological and theoretical approaches used in conducting the study and other limitations arising from situations encountered by the researcher. Regardless of the type, the encountered limitations do not weaken the meaning carried by the study as they are the results of varied and justified approaches that the study opted for. Nevertheless, these limitations create room for further research to be undertaken within the missing contexts.

The research design adopted is the main methodological limitation. Due to the explanatory qualitative inquiries in determining how smallholder organic farmers' market participation is influenced by social capital, the study opted for a qualitative case study research design. The research design was applied to the three purposively selected cases of smallholder organic farming schemes. As Flick, (2014) explains, unlike quantitative studies, for qualitative studies, the generalizability of findings beyond individuals, groups, settings or time other than those represented becomes difficult. Being conducted to selected cases of smallholder organic farming schemes, the generalization of the design and findings is only possible for other populations of smallholder organic farming groups and schemes that reflect similar characteristics to the ones that the study has used (Maxwell, 2021; Creswell, 2014; Maxwell & Chmiel in Flick, 2014).

In another context, the limitations of this study are observed from the theoretical lens or conceptual approach point of view. Qualitative search is based on theoretical/analytical generalization resulting from the theory developed by the study, rather than statistical generalization derived from statistical strategies in quantitative research (Flick, 2022, Maxwell, 2021; Yin, 2018). Being a case study, this study's generalization is based on findings resulting from the theory adopted; the Social

Capital Theory and the Sustainable Livelihood Framework, and the conceptual framework adopted by the researcher. The study applied only two components of the theories which are internal cooperation and social networks. Other social capital components such as norms, social values, moral obligations and trust (Coleman, 1998; Putnam 1993; Siisiainen, 2000) were not adopted as constructs of the study.

The analytical generalization made in this study is however useful in that it has contextually opened insights into how social capital aspects play a role in enhancing smallholders' market participation. If adopted, the mere application of numerically derived statistical results for generalization might not come up with more insights than these which resulted from the study. Again, the results for this study (derived from the studied social capital elements in the purposively selected cases of organic farming schemes in Tanzania) could be different if the same study using the same social capital elements was conducted in other settings or countries. The focus of the study and its findings was based on a specialty production sector, the organic farming sub-sector, which includes smallholders who partner with agribusinesses. The characteristics of group formation and governance, the respective social capital, and the modes of accessing markets in this sector and in the study area (Tanzania) are likely to differ from other farming sectors in other contexts and countries. In this respect, the generalization and transferability of results for this study in wider contexts become limited.

Overcoming such limitations, the study proposes an extended scope for the application of the theory for a better understanding of its effect on smallholder organic (and probably even non-organic) farmers' market participation. An extended scope of smallholder organic farmer groups and social capital components in developing conceptual frameworks is necessary for improved generalizability and transferability of results to other contexts and environments. Generalizations or lessons learned from a case study may potentially apply to a variety of situations beyond the defined population of cases intended to be represented by the original case (Yin, 2018). Transferring the findings of this study is therefore possible in contexts even beyond those concerned with organic farming. For example, it might be possible in other smallholder farmer-inclusive agribusinesses as long as they bear similar characteristics to those observed in the studied cases. Future research studies intending to use the case study research design in similar situations can come up with better results if the design is applied to contexts with multiple cases of formalized, institutionalized and well-governed farmer groups working with agribusinesses.

The other limitation encountered in this study is associated with the methods/ techniques used for data collection. The study used in-depth interviews with key informants and Focus Group Discussions (FGDs) with smallholder organic farmer groups. The data collection techniques provided room for biases in responses from respondents and sometimes deviation of data relevant to the intended study (Cresswell, 2014). In this regard, picking relevant data for codification during the analysis was challenging. The researcher however, addressed this limitation by working only on transcripts which were observed to have little bias. In the future, studies on social capital and market participation can use surveys or questionnaires as data collection techniques, to complement the focus group discussions and in-depth interview data collection tools used in this study.

8.11 Chapter summary

This chapter has presented the various aspects that have been covered by the study. It has presented the summaries of findings and conclusions on the four specific research questions of the study. In each specific finding, the chapter has explained the research-based views of other researchers on the findings. In line with the specific research questions, the chapter has presented the general conclusion on the main research question inquired by the study. The chapter has also presented the implications of the study to the existing theoretical foundations, empirical research, current policy and practices, and future research. In focus to bring implementable impacts, the chapter has presented the recommendations to various actors in organic farming undertakings. The stated recommendations aim at enhancing smallholder organic farmers' social capital practices and market participation. Moreover, the chapter has presented the limitations in scopes of generalization, transferability of the methods and findings, and data access techniques of the study.

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APPENDICES

Appendix 1: Research Instrument

RESEARCH INSTRUMENT USED FOR FIELDWORK DATA COLLECTION IN DAR ES SALAAM, KILIMANJARO AND MOROGORO REGIONS, TANZANIA

PHASE ONE: IN-DEPTH INTERVIEWS WITH GOVERNMENT OFFICERS

Includes a checklist of questions for in- depth interviews with government officers from TOAM and TanCert, the two national organs responsible for management and governance of organic farming activities in Tanzania.

The other is a checklist of questions for in-depth interviews with two District Agricultural Management Officers in Siha and Morogoro Districts from which the selected organic farming schemes that involve smallholder organic farmers operate.

Part I: Checklist questions for in-depth interviews with TOAM Officer in Dar es Salaam

Main theme: Organic farming and smallholder farmers' participation

1. Would you briefly explain what is all about TOAM? (name, year established, purposes, scope of operation etc.)
2. What are the specific roles that TOAM plays in fostering and managing organic farming practices in Tanzania?
3. May you briefly explain on the trend in growth of organic food production in Tanzania?
4. May you briefly explain the implications of the trend of growth on the entire organic farming sub-sector in Tanzania?
5. In which regions of Tanzania do organic farming practices mostly take place?
6. Which crops are mostly produced organically in Tanzania?
7. For what purposes (subsistence or commercial) are farmers engaged in organic farming?
8. Which groups of farmers (agribusinesses or smallholder farmers) are mostly engaged in organic farming practices in Tanzania?
9. Do smallholder organic farmers contribute to production of the proportion of commercialized organic products in Tanzania?
10. Who are the most consumers of organic products produced by smallholder farmers in Tanzania?
11. Would you briefly explain the ability of smallholder organic farmers to compete in markets for their organic products?
12. How do smallholder organic farmers access domestic markets for organic products?
13. Do smallholder organic farmers access international markets for organic products? Explain.
14. May you briefly explain the socio-economic outcomes (income levels, livelihoods) of smallholder organic farmers' participation in organic farming?
15. Are there any collaborations among organic farming practitioners in Tanzania? Explain.
16. Who are the other key players in enhancing organic farming practices in Tanzania?

17. Are smallholder organic farmers networked with institutions or organizations interested in organic farming practices? Explain.
18. How does TOAM facilitate smallholder organic farmers to participate in organic farming in Tanzania?
19. How does TOAM facilitate smallholder organic farmers in meeting the organic farming requirements and standards to improve their participation in organic farming in Tanzania?
20. What roles does TOAM play in fostering smallholder organic farmers to create and access reliable markets for their organic products?
21. Which strategic and policy suggestions does TOAM make to improve smallholder farmers' participation in organic farming in Tanzania?

Part II: Checklist questions for in-depth interviews with TanCert Officer in DSM
Main theme: Certification of smallholder organic farmers in Tanzania

1. Would you briefly explain what is all about TanCert? (name, year established, purposes, scope of operation etc.)
2. What are the specific roles that TanCert play in fostering and managing certification of organic farming practices in Tanzania?
3. May you briefly explain how the overall trend of organic certification has been over time to date in Tanzania? (numbers or categories certified where possible)
4. May you briefly explain how the trend of smallholder organic certification has been over time to date in Tanzania?
5. Which areas of smallholder food production are mostly certified in Tanzania?
6. What are the certification agencies responsible for smallholder organic farmers certification in Tanzania? Are these agencies domestic or international?
7. What is the role of TanCert in overseeing the certification processes that are administered by certification agencies?
8. In which levels of the agricultural value chain are certification process mostly done in Tanzania?
9. May you briefly explain the challenges that smallholder organic farmers encounter in initiatives to certify their organic products?
10. May you briefly explain the market barriers that smallholder organic farmers encounter due to lack of products certification in Tanzania?
11. May you briefly explain the impacts that organic certification has on smallholder organic farmers' participation in organic farming in Tanzania?
12. What role does TanCert play in facilitating smallholder organic farmers to overcome barriers to certification?
13. Which strategic and policy suggestions does TanCert make to improve smallholder organic farmers' participation in organic certification schemes in Tanzania?

Part III: Checklist questions for in-depth interviews with District Agricultural Development Officers in Siha and Morogoro Districts

Main theme: General aspects of organic farming practices and smallholder farmers participation in the districts

1. Would you briefly explain the general status of organic farming practices in your district?
2. May you briefly explain the trend in growth of organic food production in your district?
3. In which regions/areas in your district is organic farming mostly practiced?
4. Which crops are mostly produced organically in your district?
5. For what purposes (subsistence or commercial) are farmers engaged in organic farming in your district?
6. Which groups of farmers (agribusinesses or smallholder farmers) are mostly engaged in organic farming practices in your district?
7. Do smallholder organic farmers constitute the proportion of commercialized organic products in your district?
8. Who are the most consumers of organic products produced by smallholder farmers from your district?
9. Would you briefly explain the ability of smallholder organic farmers in your district to compete in markets for their organic products?
10. How do smallholder farmers in your district access domestic markets for organic products?
11. Do smallholder farmers in your district access international markets for organic products? Explain.
12. May you briefly explain the socio-economic outcomes (livelihoods, income levels) of smallholder organic farmers' participation in organic farming in your district?
13. Do smallholder organic farmers make use of any forms of collaborations in the district? Explain.
14. Are smallholder organic farmers networked with institutions or organizations interested in organic farming practices in your district? Explain.
15. Who are the other key players in enhancing organic farming practices in your district?
16. What are the famous organic farming schemes that involve smallholder farmers in your district? Explain.
17. May you explain the role of organic farming schemes in enhancing smallholder farmers participation in organic farming in the district?
18. What roles do the schemes play in enhancing smallholder farmers secure markets for their organic products?
19. Would you briefly explain the role of your department in facilitation of smallholder organic farming activities in your district?
20. May you explain the responsibilities of your department in facilitating smallholder organic farmers to secure markets for their products?
21. Which strategic and policy suggestions does your department make to improve smallholder farmers' participation in organic farming in your district?

SECTION TWO: IN-DEPTH INTERVIEWS WITH TARGET OFFICERS IN ORGANIC FARMING SCHEMES

This includes a checklist of questions for in-depth interviews with management officers responsible in the two purposefully selected organic farming schemes (Vanilla, Africado and SAT Organic Farming Schemes) that involve smallholder farmers.

Part I: General information on the scheme

1. What is the name of your scheme?
2. When did the scheme start working with smallholder organic farmer groups in the District?
3. What form of corporation does the scheme belong to? (government, private company, an NGO, an FBO, an independent initiative)
4. What is the scope of operation of the scheme?
5. How many groups of smallholder organic farmers does the scheme currently manage?
6. What is the mode of organizing smallholder organic farmer groups in the scheme?
7. What types of contractual agreements does the scheme use in incorporating smallholder organic farmer groups?
8. Which groups of smallholder populations (men, women, youths, etc.) are mostly engaged in organic farming under the scheme?
9. What are the main organic crops that the scheme cultivates with smallholder farmers?
10. Are the main organic crops cultivated by smallholder organic farmers under the scheme certified? Explain.

Part II: Questions on smallholder organic farmers' social capital and market participation in the scheme

1. In which ways do smallholder organic farmers internally cooperate (work together) in groups that work with the scheme?
2. Do smallholder organic farmer groups that work with the scheme have external social networks?
3. How does the scheme facilitate internal cooperation in smallholder farmer groups that work with improved organic production?
4. How does the scheme facilitate smallholder organic farmer groups to access social networks for improved organic markets participation?
5. Could you please briefly explain the modality of collaboration between the scheme and smallholder farmer groups that it includes in organic farming?
6. How do the existing forms of collaborations in the scheme facilitate smallholder organic farmers to participate in organic farming in the area?
7. May you explain how the existing forms of collaborations in the scheme facilitate smallholder organic farmers to secure markets for their organic products?
8. What are the main challenges that the scheme encounters in its initiatives to enhance smallholder organic farming practices?

9. Which strategic and policy suggestions does the scheme propose to improve smallholder farmers' participation in organic farming in the area?

SECTION THREE: THEMES FOR FOCUS GROUP DISCUSSIONS WITH SMALLHOLDER ORGANIC FARMER GROUPS

Includes themes for guiding focus group discussions (FGDs) with selected smallholder organic farmer groups in organic farming schemes in the study area.

Part I: General information on selected smallholder organic farmer groups in the scheme

1. Name of organic farmer group
2. Time of group establishment
3. Main reasons for its establishment
4. Basis for group formation and membership
5. Group composition (gender, youths)
6. Current number of group members
7. Location aspects of group members (e.g. same village, street etc.)
8. Group organization structure and mode of leadership
9. Land ownership in group (individual ownership, common ownership)
10. Average owned and cultivated farm size
11. Name of the farming scheme the group is affiliated to
12. Beginning of group partnership with the scheme
13. Crop(s) types cultivated under the scheme
14. Crop farming system and certification status under the scheme
15. Group mode of crops selling to markets
16. Types of internal cooperation (working together) in the group
17. Forms of social networks (social external links or collaborations) established by the group.

Part II: Examining various aspects of internal cooperation, external networks and smallholders' market participation

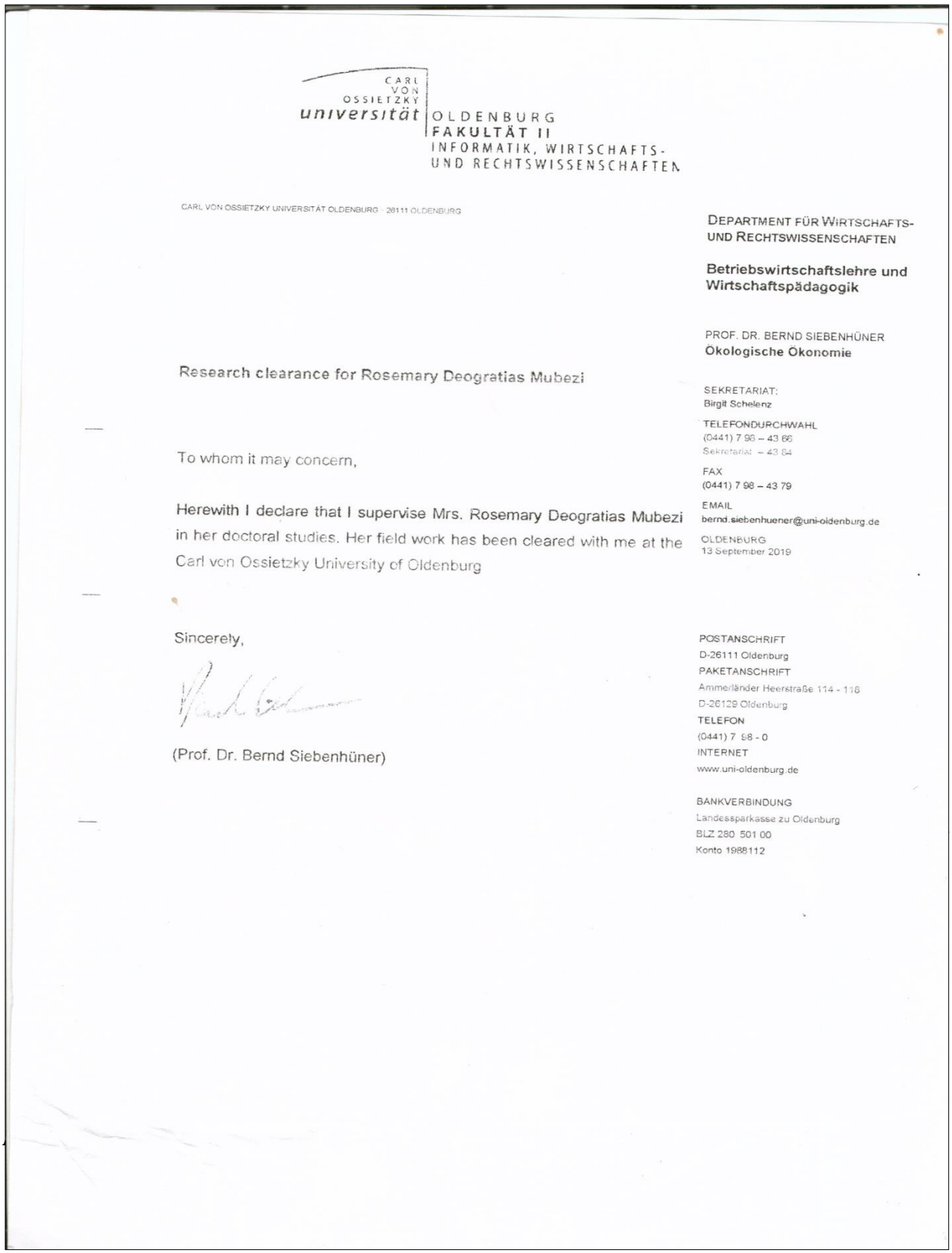
1. **Internal cooperation: (Defined as working together in groups)**

1.1 **What is its nature/form?** How is it structured: Formal structure, informal structure, composition (based on location, gender, age groups, economic status/ income level, education etc).

1.2 What is the role of its nature/ form in: Influencing organic farmers ability to establish supply chains relationships, improve supply of organic products in organic market distribution channels and in overcoming market entry barriers.

1.3 **How is internal cooperation governed:** Administered under formal and institutionalized rules and guidelines, regulations, norms and ethical standards or it is informal without formally stipulated rules and guidance.

1.4 What is its role of its governance mechanism in: Influencing organic farmers ability to establish supply chains relationships, improve supply of organic products in organic market



CARL VON OSSIETZKY universität OLDENBURG
FAKULTÄT II
INFORMATIK, WIRTSCHAFTS- UND RECHTSWISSENSCHAFTEN

CARL VON OSSIETZKY UNIVERSITÄT OLDENBURG · 26111 OLDENBURG

DEPARTMENT FÜR WIRTSCHAFTS- UND RECHTSWISSENSCHAFTEN

Betriebswirtschaftslehre und Wirtschaftspädagogik

PROF. DR. BERND SIEBENHÜNER
Ökologische Ökonomie

SEKRETARIAT:
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EMAIL
bernd.siebenhuener@uni-oldenburg.de

OLDENBURG
13 September 2019

Research clearance for Rosemary Deogratias Mubezi

To whom it may concern,

Herewith I declare that I supervise Mrs. Rosemary Deogratias Mubezi in her doctoral studies. Her field work has been cleared with me at the Carl von Ossietzky University of Oldenburg

Sincerely,

(Prof. Dr. Bernd Siebenhüner)

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THE OPEN UNIVERSITY OF TANZANIA

Office of the Deputy Vice Chancellor (Resources Management)

P.O. Box 23409
Dar Es Salaam, Tanzania
http://www.out.ac.tz

Tel: 255-22-2666752/2668992
Fax: 255-22-2668560
E-mail: dvc-rm@out.ac.tz

Ref.No.OUT./PF.1052 **20/11/2019**

Farming Schemes in Kilimanjaro,
Kilimanjaro

Dear Sir/Madam,

RE: INTRODUCTION LETTER FOR ROSEMARY DEOGRATIUS MUBEZI

The above mentioned is employed by The Open University of Tanzania. Applicant's address is P. O. Box 23409, Dar es Salaam and her **ID No. is 1052**

Please avail her all necessary assistance.

Thanking you in advance.

Yours,
THE OPEN UNIVERSITY OF TANZANIA

S. Mukama
For Deputy Vice Chancellor (RM)

THE UNITED REPUBLIC OF TANZANIA
PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

KILIMANJARO REGION
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KILIMANJARO
Tel. No. 027-
2754236/7, 2752184
Fax No.027 – 27-54430
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ras.kilimanjaro.go.tz
Ras.kilimanjaro@tamisemi
.go.tz

OFFICE OF THE REGIONAL
COMMISSIONER,
P. O. BOX 3070,
MOSHI

In reply please quote:

Ref. No. FA.228/276/03/200

29th November, 2019

District Executive Director
SIHA

Re: **RESEARCH PERMIT**

Refer to the above subject.

2. I would like to Introduce to you **Rosemary Mubezi** who is a bonafide Researcher from **Carl Von Ossietzky Universitat**.

3. She expects to conduct research on "***Social Capital and Market Participation of Smallholder Organic Farmers in Tanzania"***

4. The permission has been granted for her to collect data from **1st December to 31st December, 2019.**

5. Please give her the required Co – Operation and make sure that she abide by all Government regulations and directives.

Thank you for your cooperation.

Nicholas Kombe
Kny**: KATIBU TAWALA MKOA**
KILIMANJARO
for, Regional Administrative Secretary
KILIMANJARO

Appendix 3(2). Research Permit from Kilimanjaro Regional Commissioner's Office

HALMASHAURI YA WILAYA YA SIHA

Mawasiliano:
Simu: 0732973257
Nukushi: 027-2756863
Baruapepe:
ded@sihadc.go.tz

Unapojibu tafadhali taja:
Kumb. Na. SDC/ S.20/7/40

Ofisi ya Mkurugenzi Mtendaji (W),
S. L. P. 129,
SIHA.

Tarehe:02/12/2019

Mtendaji wa Kijiji,
Kijiji cha Wandri
SIHA

YAH: RUHUSA YA MAZOEZI YA VITENDO KWA MWANAFUNZI ROSEMARY MUBEZI KUTOKA CHUO KIKUU CHA CARL OSSIETZKY

Tafadhali rejea somo tajwa hapo juu.

Mwanafunzi Rosemary Mubezi anayesoma katika Chuo kikuu tajwa hapo juu, ameruhusiwa kufanya utafiti katika Wilaya ya Siha.

Utafiti huo unahusu" **Social Capital and Market Participation of Smallholder Organic Farmers in Tanzania"** utafiti huu unatarajiwa kuanza kuanzia tarehe **01/12/2019** hadi **30/12/2019.**

Mnaombwa kutoa ushirikiano kwa mtafiti huyu ili aweze kufanikisha kazi hiyo

Hata hivyo, Halmashauri ya Wilaya ya Siha haitahusika na gharama yoyote katika kipindi chote cha mazoezi hayo.

Nakutakia utekelezaji mwema.

Neema Mponji
Kny: MKURUGENZI MTENDAJI(W)
SIHA

Kny. MKURUGENZI MTENDAJI (W)
SIHA

Nakala: Katibu Tawala(M) - Kwa taarifa

THE UNITED REPUBLIC OF TANZANIA
PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

Telephone:No. : 2614096

FAX No: 2613848

DISTRICT COMMISSIONER OFFICE,
P.O. BOX 681
MOROGORO

in reply please quote:

Ref: No.AB.210/249/01/36

Date: 19th December, 2019

Municipal Director,
P.O Box 166,
MOROGORO.

District Executive Director,
P.O BOX 1880,
MOROGORO.

RE: RESEARCH PERMIT

Please refer to the above mentioned subject

I am introducing to you Mrs. Rosemary Mubezi who is a student of Carl Von Ossietzky University Oldenburg (Germany) and who is at the moment required to conduct research.

The title of her research is ***"Social Capital and Market Participation of Smallholder Organic Farmers in Tanzania"*** The permit is valid from 16th December, 2019 to 07th January, 2020 and the research will cover Morogoro Districts. Please provide her with necessary assistance to enable the accomplishment of this research successfully.

Thank you for your cooperation.

Ruth John
DISTRICT ADMINISTRATIVE SECRETARY
MOROGORO

DISTRICT ADMINISTRATIVE SECRETARY
MOROGORO

Copy: Researcher. - After completing the research work, you have to return your research report to the District Commissioner's Office

Carl Von Ossietzky University Oldenburg (Germany)

Appendix 3(4). Research Permit from Morogoro District Commissioner's Office

KIKUNDI CHA WAKULIMA WA VANILA KOROKO-B

(1)

Carl von Ossietzky Universität Oldenburg
Department of Business Administration, Economics and Law
Chair of Ecological Economics
Prof. Dr. Bernd Siebenhüner

Contact Person for any queries:
Rosemary Deogratias Mubezi
Faculty of Computing Sciences, Business Administration, Economics and Law
Department of Business Administration, Economics and Law
Ecological Economics Section
Carl Von Ossietzky Universität Oldenburg
Ammerlander Heerstr. 114-118
26129 Oldenburg
Tel: 0441/798-4366
Fax: 0441/798-4379
Email: rmubezi2000@yahoo.com
Home address:
Alexanderstrasse 150
26121 Oldenburg
Telephone:015126540046

Declaration of consent

Carl von Ossietzky Universität Oldenburg

Study title: Social capital and market participation of smallholder organic farmers in Tanzania

I (Name of the participant) JOHN ABUET MMARI have been informed about the study and the Focus Group Discussion procedures. I agree to participate in this Focus Group Discussion. If I had any questions about this envisaged study, they have been answered completely and to my full satisfaction by Rosemary Deogratias Mubezi.

Informed consent for sound recording

I am informed that sound recordings are made. The recording and evaluation of the sound recording is done anonymously, using a personal codeword that I created myself and that only I know / pseudonymized, using a number and without specifying my name, and that there is a code list on paper that associates my name with the number. The coding list is only accessible to the experimenter and will be deleted after completion of the data collection. I am also informed that a very low probability that a person involved in the data analysis will recognize me. For this reason, all persons involved in the evaluation are subject to absolute secrecy and under no circumstances may they disclose confidential information to third parties.

I know that I can revoke my consent to the storage of this data without incurring any disadvantages. I have been informed that I can request a deletion of all my data at any time. However, if the code list is already erased, my record can no longer be identified and therefore cannot be deleted. My data is then anonymized. I agree that my anonymized data may continue to be used for research purposes and remain stored for at least 10 years.

Appendix 4: Samples of Documents from Research Participants

Appendix 4 (1). A Sample of Declaration of Consent form filled by a research participant

The consent form for the sound recording is voluntary. I can revoke this statement at any time. In the event of refusal or resignation, there are no costs or other disadvantages for me. However, participation in the study is not possible.

I had enough time for a decision and I'm ready to work in the Focus Group Discussion and participate in the study. I know that participation in the study is voluntary and I can terminate participation at any time without giving reasons.
I have received a copy of the participant information about the study and a copy of the declaration of consent. The participant information is part of this declaration of consent.

Participant's name in block letters: JOHN ABUEL MMAR

Place, date & signature of the participant: 04/12/2019

Researcher's name in block letters:

Place, date & signature of researcher:

MAHUDHURIO FOCUS GROUP DISCUSSION – FUKA KIJIJI
WILAYA YA SIHA (GROUP)

	JINA	ALIKOTOKA	SAINI
1.	ELIBARIKI E. MAIMU	FUKA.	
2	MARY G MAIMU	FUKA	
3	ELIZABETH G. MAIMU	FUKA	
4	ELISARIA R. MAIMU	FUKA	
5.	GILLIARD D. MWANRI	FUKA	
6.	ELIBARIKI L - MAIMU	FUKA	
7	Elia K. Maimu	FUKA	
8.	Edith S. Maimu	Fuka	
9	Uchaeli E. Munuo	Fuka	
10	~~SOKATILIA~~ S. MARANDU	FUKA	

Appendix 4 (2). A Sample of Research Participants Attendance Form