How farmers' markets can improve local food economies at household and meso-level in Tanzania

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Abstract
There is a growing concern that farmers' crops are not efficiently sold due to poor market structure and/or inadequate government and cooperative associations' involvement. This study explores the nature of farmers' market channels and their influence on local food economies. The study adopted a Mixed Method Research approach which combined household level survey, meso-level market survey and structured interviews. Primary data collection used interviews with key informants, market agents, market and household surveys and focus group discussions. The sample size (277 households) was adequate for valid and reliable findings. However, to have a greater claim to generalization, further studies need to be carried out in more districts in Tanzania. Overall, the study found out that there is limited market access of information on agricultural market channels which limits farmers' productivity in the local food economy. Likewise, information sharing about agricultural market channels is limited to households since only radio and TV have to a lesser extent been available as a source of information. The findings imply that without adequate government and NGOs' involvement in empowering the farmers on agricultural market information and access to finances and credits, very little improvement will be realised in the farmers' markets structure.
Keywords: farmers' markets, local food economy, market channels

Introduction

There is a growing concern that farmers' crops are not efficiently sold due to poor market structure and or inadequate government and

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cooperative associations' involvement. Farmers' markets have been considered as direct marketing channels which allow farmers to have more control over their distribution and marketing activities relative to wholesale or commodity channels. Farmers markets also offer an alternative outlet for consumers to seek local, fresh products directly from the source (Schmit and Gomez, 2011). Besides being a source of improving people's livelihood and the economy of a place (social capital), farmers markets are also a source of households' income which makes small family farms viable (Oberholtzer and Grow, 2003).

The concept of local food has received multiple definitions which vary according to context. In this study, the term local food is used to refer to food that is grown and distributed regionally, via direct sales to consumers or, appears where there is the so called "the unification of food production and consumption within the same physical and social space" (Martinez, 2010; Olson, 2019; Trivette, 2017). The concept of local food is also used in this study to include community-based agriculture "civic agriculture" where farm, food and agriculture are combined in sustaining community production and consumption (Lyson, 2004). The term 'local food economies' is used to refer to initiatives by farmers to produce and supply/distribute foods produced locally, but also distributed both locally and regionally. The main goal among farmers being expansion of market channels for the locally produced foods.

This study on the relationship between the state of farmers' markets and local food economies in Kishapu is carried out based on the global Tanzanian features which are included in various strategies set by the government to eradicate abject poverty in all its areas. The Vision of Kishapu District Council is to enable the community to have a higher quality of life, improved income, and a strong and sustainable local economy. Likewise, the Mission Statement of Kishapu District Council is to involve community and stakeholders in the provision of high quality social and economic services using available opportunities and resources and adhering to principles of good governance (Kishapu District Council, 2014). The study considered among other things, various strategies such as The Tanzania Development Vision 2025 designed in 1999; the National Poverty Eradication Strategy (NPES) designed in 1998; and Poverty Reduction Strategy Paper (PRSP) designed in 2000 which set the goal

of eradicating abject poverty by 2025. Likewise, in the wake of the Highly Indebted Poor Countries (HIPC) initiative, PRSP was developed as a short to medium term strategy that focused on interventions in priority sectors. The review of PRSP guided the formulation of the National Strategy for Growth and Reduction of Poverty (NSGRP or MKUKUTA) (HBS Report, 2014; URT, 2011/12). In this regard, this study is set to examine if the farmers' markets have contributed to the achievement of the various goals set in several initiatives to eradicate poverty in Tanzania.

The paper is organized as follows: the next part explores the literature on Kishapu, that is, geographical location, climate, drainage, agricultural systems and land use. This is followed by methodology part where research design and data collection procedures are explained. The last parts include findings, discussion and recommendations on various aspects explored in the study.

1. Literature review

1.1. Kishapu: geographical location

Kishapu is one of eight administrative districts of Shinyanga region, with headquarter at Mhunze. Shinyanga is part of the Lake Zone Region in the Western part of Tanzania. The region is located south of Lake Victoria at 20 to 160 km from the shoreline. It borders the regions of Simiyu, Geita, Mwanza, and Tabora. Kishapu district has 3 Divisions, 20 wards and 114 villages (Shinyanga Regional Commissioners Office, 2006; Kishapu District Commissioner's Office, 2014). The district lies between latitude 3^0 $15^{'}$ and 4^0 $5^{'}$ South of the Equator and longitudes 31^0 $30^{'}$ and 34^0 $15^{'}$ East of the Greenwich meridian. The district is bordered by Meatu and Iramba Districts in the East, Shinyanga in the West, Kwimba and Maswa in the North and Igunga District in the South. In terms of area and general land use, the District has a total area of 4,333 sq. kilometers of which 101sq km is covered by forest; 1,898sq.km is potential for agricultural activities, and the area of 747 sq.km is suitable for grazing. The remaining 1,536 sq. km is used for settlements and 50 sq. km is dry plain, arid land and rocks that are unproductive for agriculture and livestock (Kishapu District Commissioner's Office, 2014).

1.2. Population development and distribution

According to official recording of population Census carried out in 2012, Kishapu District had a total population of 272,990 (The NBS Population Census 2012). National Bureau of Statistics estimates that there is a 21% increase rate of inter-censual growth in Shinyanga. In this regard, the figures posted in 2012 will be more likely increased by 21% by 2016. Shinyanga region, for example, had a population of 1,534,808 in 2012 Census, however, by 2016 the population estimates are 1,666,554 (2016-Tanzania in Figures, National Bureau of Statistics, 2017). Table 1.1 below provides the summary of population distribution by gender and age.

Table 1.1: Population Distribution by Age and Gender (%)

Age	Male	Female	Total
Less than 15	66,170	66,979	131,149 (48%)
15 to 59	61,813	65,138	126,951 (47%)
60 and above	7,286	7,604	14,890 (5%)
Total	135,269	132,881	272,990 (100%)

Source: Census 2012 by NBS, 2014

1.3. Climate features

The general type of climate in Shinyanga region is a dry tropical climate with temperatures ranging from 22^0C to 30^0C, with two main distinguished rainy and dry seasons. The average temperature for Kishapu is about 28^0C. The rainy season usually starts between mid-October and December and ends in the second week of May (Kishapu District Council, 2012). The district experiences rainfall of 600 mm as minimum and 900 mm as maximum per year.

1.4. Drainage and water resources

It is reported by the Global Food Security Index that "water is a limiting factor for agricultural production in many places and is expected to become even more of a constraint as rainfall patterns shift and as temperatures rise, increasing the rate of water lost through evaporation" (Global Food Security Index, 2018:11). Kishapu like any other district in Shinyanga region is characterised by harsh climatic conditions (semi-arid), where there is difficult water availability and poor socio-economic status of the largely agricultural and pastoral communities. Groundwater is generally available; however, the quality of the water varies and is prone to high fluoride. People can dig from five to ten meters deep wells for community use.

1.5. Sewerage and sanitation

Generally, Tanzania has poor sanitation conditions which are common both in the rural and urban areas. Access to safe water is a problem mainly for rural areas, where poverty is also widespread, as approximately 40% of the population are below the basic-needs poverty line. In the urban areas approximately, a quarter of the population is poor. In this regard, high population growth rates imply increasing demands for social services such as sewerage, clean water, and accessible health care (URT-Nutrition Country Paper, 2013).Sanitation facilities in Kishapu District are not very well established. It is reported that only about 80 percent of households in Kishapu district have toilets. This means that about 20 percent of households live without toilets which make them prone and susceptible to contacting various diseases such as diarrhoea and water borne diseases (Kishapu District Council, 2012).

1.6. Main farming systems and land use

Kishapu is one of the Shinyanga Region districts which are under pressure due to the increase in the number of livestock and crop production which leads to severe land degradation (Wiskerke, 2008). Rangeland degradation due to extensive grazing in Shinyanga threatens livelihood in the region, in terms of shortage of forage during dry seasons, deforestation, wood fuel scarcity, food insecurity and severe soil erosion (Kamwenda, 2002). There is livestock farming

system in Kishapu. However, the production is limited due to increased pressure on fragile grazing lands caused by increased crop production and unpredictable rainfall (Selemani et al., 2012). The pressure in land use systems is high among multiple land users for sustainability of pastoral production systems, crop production and conservation of natural resources (Selemani, 2014; Selemani et al., 2013). The 2012 Census results show that most of the people in Shinyanga depend on agriculture (both crop production and livestock keeping) for their livelihoods. The main farming systems in Shinyanga include shifting cultivation where crops such as maize, legumes, beans and groundnuts are produced. There are also other crops which grow well despite the decline in soil fertility. These include; sorghum, millet, cotton and oilseeds. Other crops sustain intensive cultivation where farmers need a lot of money and labour to increase the yield per area of land; these include sweet potatoes, sorghum groundnuts and cotton. There is another farming system which is characterized by alluvial soil and is suitable for rice. This takes place in rival valleys and alluvial plains (Mnenwa and Maliti, 2010).

The use of land in Kishapu is mainly for agricultural purposes. A number of households however, practice mixed crop and livestock farming. The most notable type of land use is the practice called Ngitili, which involves retaining an area of standing vegetation from the beginning of rainy season and opening it up for grazing at the peak of dry season. The practice can be either communal or private. This practice has been useful in preserving the environment from land degradation but also as a way of securing firewood, getting building materials, timber and charcoal making (Seleman, Eik, Holand, Adnoy, Mtengeti and Mushi, 2012). This literature on Kishapu has exposed several characteristics which inform us about Kishapu in its geographical location, climatic features, farming system and land use, drainage and water resources, etc.

2. Study design and methodology

This research examines how farmers' markets can improve local food economies at household level and meso-level in Tanzania. More specifically, it explores the relationship between household-based farming and marketing practices in Kishapu District.

2.1. Research objectives

(i) To assess the extent to which farmers' markets can improve local food economies in household level and meso-level in Tanzania.
(ii) To examine the extent to which market structures are supportive and friendly to farmers at both household level and meso level in Tanzania.

2.2. Research questions

(i) In what ways can farmers' markets improve local food economies at household level and meso-level?
(ii) Are farmers' crops efficiently sold in the current market structure?
(iii) To what extent are government or cooperative associations involved in supporting farmers' markets?
(iv) What is the nature of farmers' market channels?

2.3. Methodology

This study adopted a Mixed Methods Research (MMR) approach. It is designed in a way that both Qualitative and Quantitative elements were used in sampling, data collection, and data analysis. In this regard, it is a Mixed Methods Research study due to the design used in its process or research activity (Maxwell, 2013). The purpose of using mixed methods in research is 'to expand and strengthen a study's conclusions and, therefore, contribute to the published literature and to contribute to answering one's research questions' (Schoonenboom and Johnson, 2017:110).

Johnson and Christensen (2017) treated in depth the characteristics which prompt researchers to use MMR, but for this study it suffices to explain only three elements or dimensions which influenced the choice of research design for this study. In this regard, the rationale behind the use of MMR approach in this study includes three elements: (a) the purpose of mixing (b) the theoretical drive (c) the degree of complexity of this study d) Multi-levels of reality studied

(a) The purpose of mixing methods: The study used market surveys and household surveys because the issues which were studied were at two levels: Household Level and Meso Level. In this regard, it was necessary to adopt a method that would include mixing of data collection techniques to include household surveys and market surveys which were distinct in nature. Market surveys were beyond the household surveys since they included actors at village level to district level. Household surveys on the other hand were made through structured in-depth interviews with household individuals. Besides the surveys, Focus Group Discussions were used to verify, clarify and deepen the understanding of the data collected through surveys. Thus, observations made during Focus Group Discussions were useful in ascertaining reliability and credibility of information which was collected through other informants.

(b) Theoretical drive: theoretically, this study was dominantly descriptive. The market surveys included an assessment of local markets, including retail food markets, agricultural commodity markets, agricultural input markets and non-agricultural essential commodities such as energy fuel. The purpose of this assessment was to identify actors and describe how markets impact, directly or indirectly, on local food economy. Thus, both retail and wholesale market structures and functions for the main commodities were investigated. Other aspects of the market analysis included the key actors involved, and price trends and fluctuations. The assessment also identified the key food and cash crops as well as livestock products and markets in the area. The study was not correlational or experimental/predictive in nature, but rather explorative and descriptive with the aim of generating an in-depth and accurate account of farmers markets and local food economies in the study area. This is in line with Morse and Niehaus' (2009) view that a study can be categorized based on theoretical drive as either exploration-and-description or on testing-and-prediction.

(c) The degree of complexity of the study: The study was complex due to the nature of the research questions. The main research question was: how can farmers' markets improve local food economies at household level and meso-level? In answering this question, the study had to involve different actors who could only be reached through multi-level research and multi-research methods. In this regard, the use of mixed methods was important

for complementarity purposes (i.e., seeking for clarification and elaboration) and for expansion of inquiry to collect as much information as possible. This is in line with mixed methods study purposes elaborated by Schoonenboom and Johnson (2017).

(d) The study was also multi-level in the sense that household surveys and market surveys differ in the level of examining them. In this regard, mixing household surveys which generated quantitative data (at individual level) with market surveys which generated qualitative data (at ward and district level) was necessary to capture as much information as possible in the study. The study also collected data from different actors in the farmers' markets and the local households. These included informants from seed companies, agrochemical companies, fertilizer companies, farm machinery companies and agricultural scientists. There were also traders who included retailers and wholesalers. This mixture of informants entailed multiple levels of reality as exposed by Yin (2013). It was also reasonable to use mixed methods approach in this type of study because, 'integration of data from various sources does not only involve the integration of qualitative and quantitative data, but also the integration of data originating from different sources and existing at different levels' (Schoonenboom and Johnson, 2017:123). Thus, due to the complexity of the study, it was relevant to use mixed methods approach to increase credibility and validity of study findings. This is in line with researchers who recommend mixed methods approach as a source of increasing credibility. Researchers suggest that employing mixed methods approach among others enhances the integrity of study findings (Bryman, 2006).

2.4. Data collection procedures

The data collection procedures were sequential in design (Guest, 2013); the quantitative component preceded the qualitative component. In this regard, at household level the study collected quantitative data through household surveys with the aid of structured questionnaires. Two phases of household survey were conducted in 2014, before harvest in February and March and after harvest in August and September. A list of all households and members was collected from respective village officials. Through random sampling data was collected from

255 households. Consent was sought from respondents before beginning interviews.

Interviews with key informants and focus group discussions followed, which informed qualitative data collection approach. Thus, at meso-level, interviews with key informants included research assistants holding meetings with ward and village leaders for preliminary arrangements of interviews and focus group discussion, which were completed in week one. Interviews started on week two and focus group discussions (FGDs) took place in weeks three and four. Interviews at ward and village levels consisted of interviewing major suppliers and sellers of various goods sellers of agricultural production inputs such as hoes, insecticides, pesticides, etc. In this regard, the researchers identified several seed companies, agrochemical companies, fertilizer companies, farm machinery companies and agricultural scientists who were ready for interviews. After the interviews, research assistants carried out focus group discussions by choosing five participants from each group to take part in the FGDs. The selection consisted of getting at least one person from the represented groups, i.e., seed companies, agrochemical companies, fertilizer companies, farm machinery companies and agricultural scientists. On the part of retailers and wholesalers, three participants were from the retailers and two were wholesalers.

3. Findings

3.1. Introductory demographics

The sample of the population was made up of 277 respondents. Among them 215 respondents (which is 78%) were males. In terms of gender balance, males were over represented in the sample. On marital status, 79% of the sample were married. Table 2.1 below provides more information on the marital status of the sample.

Table 2.1 Marital Status

	Single	Married	Widowed	Divorced/ Separated	**Total**
Count	8	219	31	19	277
%	2.9%	79.1%	11.2%	6.9%	100%

When the sample was examined in terms of the relationship between the first respondent and the household head, it was found out that 263 (94.9%) respondents were the self-household heads. Nine first respondents (3.2%) reported that they were either wife, husband or partner. This statistic affirms to the researcher that the respondents were true representatives of the sample. Only three respondents were either a son or a daughter. Two respondents reported that they were grandchildren.

In terms of the time the respondents spent in school as a measure of their education level, 154 (55.6%) respondents reported that they had seven years in school. This translates to having attended primary school education which lasts for seven years in Tanzania. However, 68(24.5%) respondents reported that they had never been to school. In terms of occupation, 261(94.2%) respondents reported that their main occupation is farming. Twelve respondents (4.3%) reported that they were civil servants and two respondents reported that they were either private or self-employed. While 185 respondents (about 67%) reported that they do not earn any salaries or labour wages, 92 respondents (33%) earn their income by salaries or labour wages.

4. Household level findings

This study was responding to the question on whether households have access to markets. In this regard, the questions used to capture information included

(i) Are farmers' crops efficiently sold in the current market structure?

A series of questions were used to answer the above question to determine whether farmers had access to market channels. The study found that household ability to selling their crops determined also the accessibility and profitability of their agricultural activities. Availability of markets plus proximity to market space however affects local food economies (Martinez, 2010). Market analysis

for households in Kishapu indicated several market spaces available for them. Table 2.2 below provides the status of selling channels in the market structure at Kishapu (N = 255 households). This information was an answer to the question: *Where did you sell your first harvest in the past 12 months?*

Table 2.2 Kishapu Household Crop Selling Channels

Village market	Neighbouring village market	Traders who visit the village	To neighbour	Cooperative society	Total
42	41	88	3	71	245
17.1%	16.7%	35.9%	1.2%	29.0%	100.0%

Source: The Researcher's Household Survey Data, 2014

In short, the study found out that while about 36% of the sampled population sold their crops to traders who visited the village, 29% sold their crops to cooperative society. This distribution of market channels suggests that the farmers' crops are sold efficiently. Farmers do not need to travel outside Kishapu to sell their crops since almost 65% of the farmers sell their crops to traders who visit the village and the cooperative society. The remaining market channels are all within the reach of the farmers.

Another question was; ***Did you have problems selling your harvest?*** The study found out that while 69% of the household surveyed reported that they had problems selling their harvest, 28% reported that they had no problems. Notwithstanding, when the types of difficulties in selling their harvest were analysed, most of the sampled households (65.8%) reported that low prices of their harvest were the main type of difficulties in selling their harvest. While 25.4% reported that poor transport infrastructure was the main difficulty in selling their harvest, 6.1% reported that having no formal markets was the main difficulty in selling their harvest.

Table 2.3: Types of Difficulties in Selling Household Farm Products

	Poor transport structure	No formal market	Low prices	Low demand	Weighing not calibrated	Delay in payment	**Total**
Count	58	14	150	1	4	1	228
Percentage	25.4	6.1	65.8	0.4	1.8	0.4	100%

Source: The Researcher's Household Survey Data, 2014

In responding to the question on what methods did they use to overcome the difficulties in selling their harvests, 72.8% of the respondents reported that they had to sell anyway, and about 7 percent waited for the prices to go up. In the same question, about 12% reported that they hired people to transport the harvest to sell elsewhere, and 2 percent negotiated for a better price. These findings suggest that much as there were traders from outside the village who visited Kishapu to purchase products, farmers faced problems which were related to price negotiations. That is why about 73% of the farmers sold their products despite unfavourable prices, and others looked for other alternatives including waiting for the prices to go up. Table 2.4 below provides more details.

Table 2.4: How Farmers Addressed the Difficulties in Selling Harvests

		N	**%**
1.	Sell anyway	166	72.8
2.	Wait for price to go up	15	6.6
3.	Search for market elsewhere	5	2.2
4.	Negotiate for better price	5	2.2
5.	Wait until there is high customer demand	00	0
6.	Complained for weighing to be adjusted	6	2.6
7.	Hire people/transport for crops to the market	28	12.3
8.	Reduce amount you can sale	1	0.4
9.	Report the problems to authorities	2	0.9
	Total	228	100

Source: The Researcher's Household Survey Data, 2014

On the household livestock selling channels, Table 2.5 below provides the statistics as reported by the sampled households. The study showed that while 30% of the farmers sold their livestock products to traders who visited the village, 43% sold their livestock products in the district market. In terms of market space, the next village market was the preferred market space besides traders and district market.

Table 2.5 Kishapu Household Livestock Selling Channels

SN	Selling Livestock Channel	Count	Percent
1.	Village Market	10	6.3
2.	Neighbouring Village Market	21	13.2
3.	Traders who visited the village	48	30.2
4.	District Market	69	43.4
5.	To neighbour	10	6.3
6.	Roadside	1	0.6
	Total	159	100

Source: The Researcher's Household Survey Data, 2014

Notwithstanding, when the farmers were asked about difficulties they experienced in selling their livestock products, 50% reported that the main difficulty in selling livestock products was low prices. Table 2.6 below provides further information.

Table 2.6: Types of Difficulties in Selling Livestock Products

	Poor transport structure	No formal market	Low prices	High tax	**Total**
Count	44	12	59	2	117
Percentage	37.6	10.3	50.4	1.7	100%

Source: The Researcher's Household Survey Data, 2014

When the farmers were asked about how they addressed difficulties in selling their livestock products, the responses were not very different from the ways they used in addressing difficulties in selling farm products. Table 2.7 below provides more information.

Table 2.7: How Farmers Addressed the Difficulties in Selling Livestock Products

Sell anyway because of need	Wait for prices to go up	Search for market elsewhere	Find alternative means of transport	**Total**
88	11	3	5	228
75.9%	9.5%	2.6%	2.2%	100%

Source: The Researcher's Household Survey Data, 2014

(ii) To what extent are market structures and government or cooperative associations involved in supporting farmers' markets?

Another question to the household survey was whether the households received agricultural information on marketing and prices from government extension officers. Overall, about 83% of the respondents said 'No' to this question. Nevertheless, of those who were able to get government extension services advice extended to them (48), 40% found the government extension advice "very useful" and about 47% found the advice "somehow useful". About 13% found the advice of government extension officers "not useful." Table 2.8 below provides the percentages to the responses on the question on which sources the farmers received agricultural marketing and prices information.

Table 2.8 Responses to Information on Agricultural Marketing and Prices

	Did you receive information on agricultural marketing and prices from the following sources?			
Source(s)	Count	YES (%)	Count	NO (%)
Government Extension Officers	48	17.3	229	82.7
Non-Government Organization	02	0.7	275	99
Cooperatives/Farmers Association	00	00	277	100
Radio/TV	02	3.8	275	96.2
Publication(s)	01	1.3	276	99.4

Source: The Researcher's Household Survey Data, 2014

4.1. Meso-level findings

(i) What is the nature of farmers' market channels?

There were several actors who influenced farmers' market channels from the time of production to harvesting time. These included owners and managers of seed companies, agrochemical companies, fertilizer companies, farm machinery companies and agricultural scientists. These actors were involved in supplying inputs for agricultural production. The suppliers worked hand in hand with the farmers in preparing seeds and fertilizers. The suppliers also involved agriculture scientists to determine the type of seed crops that were appropriate and which seed crops to source out and sell to farmers. Table 2.9 below provides the list of companies identified.

Table 2.9 Companies identified as Input Suppliers

Seed Companies	Other Companies
• Kibo Seed Company • East African Seed Agents • Hybrid Seed Maize • IFA Seed Company • Krishna Seed Co Ltd • Pannar Quality Seeds	Twiga Chemical Industries, Agripro Tanzania Ltd, Agriscope Agricultural Scientisits, Shinyanga Farm Supplier and BACLEMA Agrovet

It was important to know, if the presence of several suppliers of agricultural inputs guaranteed that the farmers' products are efficiently sold. However, that was not possible. The reason behind this gap in determining whether the crops will be sold or not was the variation in buying and selling terms which depend mostly on the source of the products, the quality of the products, the seasons in which the products are highly needed, the ability of the seller to give discounts, negotiations and bargains. Overall, there are no fixed prices for most of the agricultural products in Kishapu.

(iii) Are farmers' crops efficiently sold in the current market structure?

a) Producers and market structure

To answer the question on whether farmers' crops are sold efficiently, it was found out that besides farmers being vulnerable in terms of having poor and inadequate farming methods, they were also economically vulnerable. Most of the food producers in Kishapu are small scale farmers possessing less than 10 acres of arable land. These producers engage themselves in farming and or use paid labourers together with the communal and cooperative services in all stages of production. In cultivation and tillage practices, most farmers use local techniques, such as the use of knives, oxen and ploughs, hired tractors, *ukombakomba*[2], hand-hoes and other hand-equipment, during pre-harvest and post-harvest periods.

These local farming practices lack agricultural technical knowhow and thus limit crop yields which make the farmers continue the vicious circle of poor farming methods, poor yields, and consequently poor income. This situation has

[2]*Ukombakomba* is a local name for a practice of labour sharing groups on farming and other social activities. It is normally practised by households in the study area.

made most of the small-scale producers dependent on loans and credits from moneylenders who provide credit at very high rates of interest. Individual farmers and cooperatives are working as agents of food production who team together to find out good deals for farmers from government marketing organizations and cooperatives.

Unfavourable government policies on distribution of food products such as maize and rice have been unfriendly to farmers who expect better prices during harvest seasons. However, the study found out that while the government recommends to farmers to engage in farming at large scales, the government is not always available to assist the farmers sell their crops which in turn lead to low prices. Failure to sell their products leads to low income which makes it difficult for the farmers to acquire other means of livelihood. It was observed that generally, capital investment in farming for many people in Kishapu is low which affects availability of waged labour, availability of quality inputs such as tools, seeds, fertilizers and pesticides. Low capital investment also leads to poor care for the farm, poor food processing and poor storage of food crops. These consequently lead to poor crops for quality marketing.

b) Food Processing and market structure

The study found out that in Kishapu, grain milling is the major processing activity whereby individual farmers and local crushers use Posho Mills and or local means of food processing. Farmers use local millers and local packers as the primary food processing agents. It was also observed that industrial mills and food manufacturers are involved in secondary food processing. However, the scale of secondary food manufacturing is small in processing products such as beverages, milk, bakeries and edible oils. Since most of the big food processors are based in Dar es Salaam, the marketing and supply chain is very much limited for local products at Kishapu.

There are challenges in organizing farmers in processing their products. In this way, it is difficult to implement the policy guidelines on food processing since sometimes the processors use middlemen who may not have decision making power when it comes to signing contracts between processors and government agents. Other challenges include high cost of packaging materials which discourage processors from utilizing them. Failure to use packaging materials reduces the quality of farm products which consequently affects quality markets and nutritional standards. Overall, there is very minimal level of food

certification standards in the markets which affects food nutrients by having poor quality food products in the region.

c) Food Storage and its impact on markets

It was found out that most farmers in Kishapu store their food at home where a special room is allocated for storage purposes and or put their crops in a traditional storage facility normally built on wood and mud. Other agents of food storage included both individual farmers and companies such as the Musoma Food Co. Ltd and co-operatives such as Unyanyembe group. The difference between individual farmer's storage facility and cooperative's storage facility is on the size and quality of the storage. Whereas individual store would be small, and the size being determined by what the farmer expects to produce, cooperative stores are large with available space for excess harvest from members of the cooperative. Another difference is that most of the individual storage facilities are traditional while the cooperative storage facilities are modern and designed by advanced constructors. The type of the storage affects the quality of crops stored in the facility. The quality of crops affects their markets since poor graded crops do not attract good prices.

d) Small Scale Traders as middlemen in the market channels

The study found out that the main economic activities among the small-scale traders include sourcing out and supplying agricultural production outputs to farmers. They act as middlemen or intermediaries between farmers and large-scale farmers. As intermediaries, small scale traders influence the prices of crops because of the commission they get when they are linking farmers with large scale traders. They also work as auctioneers for farm products and thus connect the producers with large scale buyers when the products are brought to the market place. Local farmers may not be able to negotiate prices with big buyers. In this respect, the small-scale traders act and take charge in the market search for the farmers. Their activities influence the market chain because most of the time they affect price setting.

e) Large Scale Traders and market channels

The study found out that large scale traders in Kishapu were reported to be involved mainly in activities which are geared towards production for market. The movement of food from one point to another is determined by the quality

and quantity of food production and the bargaining powers between buyers and sellers, buying and selling conditions, availability of special cars for distribution, and seasonal variations. Accordingly, it was reported that there are advertising and communication agents who work in auction markets. Their main role is to identify market trends and pass information to buyers and traders. These agents can predict market trends due to their experience in the farming seasons and the resultant farming outputs in every season. They are like market brokers who get paid by providing relevant information to other market actors.

5. Discussion

This study attempted to show the relationship between farmers' markets and the local food economies in Kishapu district Tanzania. The main objective was to assess the extent to which the market structures and channels improve local food economies. This assessment was important since well-structured local markets have been proven to provide economic and social benefits to women in low income countries (Poulsen et al., 2015). Farmers' markets were observed to be poor and underdeveloped in accessibility. This raises a question on how farmers can be developed as a social group since most of the households farming activities were forced to operate in a "social entrepreneurship model" whereby farming activities go beyond the typical focus on profits to consideration of social benefits created by the business (Dimitri, Oberholtzer and Pressman, 2016).

In examining the relationship between farmers' markets and local food economies, the study's other objective was to explore the extent to which the local government authority guarantees quality markets for farm inputs and farm outputs. Based on the findings, this objective was not possible to establish. Firstly, it was observed that in the process of production, very few farmers use fertilizer or purchase improved seeds. This is a setback among traders and agro-chemical companies who feel that their business is not lucrative due to low purchases from the farmers. Likewise, non-certified seed crops are prone to infectious diseases and require the farmer to use a lot of pesticides and insecticides during farming season to maintain their normal growth. Secondly, in the harvesting stage, lack of secure and appropriate storage facilities limits the amount of quality crops such as maize and rice that the farmers and traders can

reserve. In this way, poor storage facilities reduce the value of the crops that are supposed to be dully available for consumption and sale in the markets.

The findings also showed that the mode of selling crops by small scale farmers is less efficient since every farmer has his or her own standards for processing and packaging the crops. In this manner, the maize and rice collection activities for example, are time consuming which amounts to lack of control in ensuring that there is quality processing of the crops. It is reported that in Tanzania, almost a quarter of all manufacturing enterprises are in the food processing sector. The sector provides employment to about 58,000 people, which represents about 56% of total employment in manufacturing (Sutton and Olomi, 2012). However, the scale of secondary food manufacturing is small in processing products such as beverages, milk, bakeries and edible oils. Since most of the big food processors are based in Dar es Salaam, the marketing and supply chain is very much limited for local products in the regions such as Kishapu.

Overall, the study findings on whether farmers' markets influence local food economies show that farmers' crops are efficiently sold despite some challenges on market channels and structure. The main challenge in farmers' market channels was accessibility of markets where they could sell their products. For livestock products, farmers had their products sold efficiently in the district market. In this regard, for farmers who are far from the district market, distance from the market will be their main challenge. However, for farmers who are close to the district market, they would not have any problems selling their products. Likewise, the study findings on how farmers address problems related to marketing channels and market structure suggest that farmers must improve their bargaining power and so gain influence in the markets to avoid middlemen hiccups on selling their products. As it stands, farmers have very weak coping mechanisms in dealing with competitive market forces in the district. Small scale traders and wholesalers take advantage of farmers' low income and low capital investment in production and processing of their products.

6. Recommendations

It is recommended in this study that for farmers' markets to improve local food economies at household level and meso-level in Tanzania, the local government authority at district level and regional level should support farmers in their

production stage to marketing stage. The support can be in the form of making sure that farmers get certified seeds and quality farm inputs from suppliers. The central government through the ministry of agriculture should also support farmers by subsidizing farm inputs such as fertilizers and pesticides to allow subsistence farmers produce quality crops. This will make farmers leap from producing crops only for consumption to producing crops both for consumption and trade. This study further recommends that farmers should unite to have more bargaining power in the markets and thus fetch for better prices for their products. Likewise, farmers should be empowered to access finance and credit to enhance mechanisation of agriculture and thus increase productivity.

Much as there are communication agents who work as brokers and transmitters of market trends between Kishapu and neighbouring regions, there is still very low market information about prices that would encourage or motivate farmers to scale up their activities on production and transportation of their crops. It is important to note that small scale farming in the local food economy when supported can be a good source of providing additional outlets for entrepreneurial small-scale farmers and producers, alternatives for consumers and opportunities for communities (Guthrie et al., 2006). In this regard, it is recommended in this study that future studies should be conducted to examine the extent to which these agents of production would be supported by governmental and non-governmental institutions to foster their collective sales and transportation of farm products for cost efficiency and nutritional objectives.

It is likewise recommended to the government authority that food processing has been a priority strategy in Tanzanian agricultural policy. Unfortunately, despite the good intentions in the policy and the presence of Tanzania Food and Drugs Authority (TFDA) there is no appropriate legislative framework that guides the handling of quality and safety licences for food processors, food sellers, packagers, processors and manufacturers. In this regard, at the time of carrying out this study, there were about 17 different bodies which were expected to regulate food processing in the country (Sutton and Olomi, 2012). It was further discovered that the guidelines in certifying food processing and packaging in Kishapu are not practised. It is time for the government to be strict on food processing procedures to enhance farmers markets and thus allow them to get quality products for domestic use and for exports.

7. Conclusion

This study showed that farmers faced challenges in ensuring that they have sustainable local markets and local food production and consumption mechanisms. These challenges included; having inadequate methods of and resources for marketing their products, difficulties in the supply of raw materials, being exploited by and facing stiff competition from large companies who have monopoly of some crops supply in the region. However, if farmers markets are to improve the local food economies, then the government should empower the agents for input supplies and market channels and identify possible ways of improving the relationship between farmers, the government and the traders who are middlemen. For this to happen, agricultural policies should be well interpreted and applied by the local government authorities for the benefit of the farmers.

References

Bryman, A. (2006). Integrating quantitative and qualitative research: How is it done? *Qualitative Research,* 6: 97–113.

Dimitri, C., Oberholtzer, L., & Pressman, A. (2016). Urban agriculture: connecting producers with consumers. *British Food Journal,* 118(3): 603 - 617: http://dx.doi.org/10.1108/BFJ-06-2015-0200.

Global Food Security Index (2018). Building resilience in the face of rising food security risks. A Report from the Economist Security Unit. Agriculture Division of DowDuPont: https://foodsecurityindex.eiu.com/ (accessed on January 18, 2019).

Guest, G. (2013). Describing mixed methods research: An alternative to typologies. *Journal of Mixed Methods Research* 7:141–151.

Guthrie, J., Guthrie, A., Lawson, R. & Cameron, A. (2006). Farmers' markets: the small business counter-revolution in food production and retailing. *British Food Journal,* 108(7): 560-573.

Johnson, R. B., & Christensen, L.B. (2017). *Educational Research: quantitative, qualitative, and mixed approaches*, 6th Edition. Los Angeles: Sage.

Kamwenda G. J (2002). Ngitili agro silvi pastoral systems in the United Republic of Tanzania. *Unasylva,* 53: 46-50.

Kishapu District Council Report (2012). Available at the District Head Quarters. Kishapu District Commissioner's Office (2014).

Household Budget Survey Report 2011/12, Tanzania Mainland, URT: National Bureau of Statistics (2014).

Lyson, T. (2004). *Civic agriculture: Reconnecting farm, food, and community*. Medford, MA: Tufts University Press.

Martinez, S. (2010). USDA Economic research service–ERR97.http://www.ers.usda.gov/publications/err-economic-research-report/err97.

Maxwell, Joseph A. (2013). *Qualitative research design: An interactive approach,* 3rd Edition. Los Angeles: Sage.

Mnenwa, R. & Maliti, E. (2010). A comparative analysis of poverty incidence in farming systems of Tanzania. Special Paper 10/4, Dar es salaam, REPOA.

Morse, J.M. & Niehaus, L. (2009). *Mixed method design: Principles and procedures*. Walnut Creek: Left Coast Press.

National Household Budget Survey 2011-2012. United Republic of Tanzania. National Bureau of Statistics, November 2014.

National Bureau of Statistics (2017). 2016-Tanzania in Figures. Accessed at https://www.nbs.go.tz/ on 11thApril 2019.

Oberholtzer, L. & Grow. S. (2003). Producer-only farmers' markets in the mid-Atlantic region: a survey of market managers. Henry A. Wallace Center for Agricultural & Environmental Policy at Winrock International, Arlington, VA.

Olson, K. A. (2019). The town that food saved? Investigating the promise of a local food economy in Vermont. *Local Environment,* 24(1): 18-36,

Poulsen, M.N., McNab, P.R., Clayton, M.L. & Neff, R.A. (2015). A systematic review of urban agriculture and food security impacts in low-income countries. *Food Policy,* 55:131-146.

Schoonenboom, J. & Johnson, R.B. (2017). How to construct a mixed methods research design. Köln Z Soziol (Suppl 2) 69:107–131.

Seleman, I.S., Eik, L.O, Yolando., Adnoy, T., Mtengeti, E. & Mushi, D. (2012). The role of indigenous knowledge and perceptions of pastoral communities on traditional grazing management in north-western Tanzania. *African Journal of Agricultural Research* 7(40): 5537-5547.

Selemani, I. S. (2014). Communal rangelands management and challenges underpinning pastoral mobility in Tanzania: a review.*Livestock Research for Rural Development,* 26(5).

Selemani I. S., Eik L. O., Holand Ø, Ådnøy T, Mtengeti E & Mushi D. (2013). The effects of a deferred grazing system on rangeland vegetation in a north-western, semi-arid region of Tanzania. *African Journal of Range & Forage Science,* 30(3): 141-148.

Shinyanga Rural Water Supply Project (2005). Water sector field trip to Mwanza and Shinyanga regions, November 28th - 30th 2005. http://www.tzdpg.or.tz/fileadmin/documents/dpg_internal/dpg_working_groups_clusters/cluster_2/water/documents_library/Field_Trip_Report_Mwanza_Shinyanga_Nov_2005.pdf (accessed on October 1st, 2014).

Schmit, T.M. & Gomez, M.I. (2011). Developing viable farmers markets in rural communities: an investigation of vendor performance using objective and subjective valuations. *Food Policy,* 36(2):119-127.

Sutton, J. &Olomi, D. (2012). *An enterprise map of Tanzania.* International Growth Centre. Hobbs and Printers Ltd., UK.

Trivette, S.A. (2017). Invoices on scraps of paper: Trust and reciprocity in local food systems. *Agriculture and Human Values* 34(3): 529–542:

The Tanzania Five Year Development Plan (2011/2012-2015/2016): Unleashing Tanzania's latent growth potentials.

Wiskerke, W. (2008). Towards a sustainable biomass energy supply for rural households in semi-arid Shinyanga, Tanzania. Thesis in Master of Science. Utrecht: Utrecht University, Department of Science, Technology and Society.

Yin, Robert K. 2013. *Case study research: Design and methods,* 5th edition. Los Angeles: Sage.