Case study

Networks of small scale agro food processing enterprises in Dodoma, Morogoro and Singida Regions in Tanzania

Abstract

For some time researchers in entrepreneurship have employed the concept of the network as a means of exploring how entrepreneurs do business. More recently, attempts have been made to show how networking contributes to small firm performance. The overall research on which this chapter is based aims to show how networking contributes to economic links in small agro-processing firms' activities. This paper assessed the influence of networking of small scale agro food processing enterprises in Dodoma, Morogoro and Singida Regions in Tanzania. Primary data were collected from 134 small agro processing firms. Secondary data were collected from Sokoine National Agricultural Library (SNAL), District councils, TRA, SIDO, Ministry of Industry and Trade, Ministry of agriculture, Tanzania Chamber of Commerce Industry and Agriculture (TCCIA), and National Bureau of Statistics and cluster officials. The paper focuses on a specific objective namely an understanding of the process of small firms' networking. The paper provides an in-depth analysis on the forms and structure of networks and how networks can facilitate linkage between local small-scale agro-processing firms and international firms. Data were collected using structured questionnaire. Data were analyzed using descriptive statistics. The analysis was grouped into how entrepreneurs value the contacts they make and their impact on business performance. The study also investigated the nature of organizational networks amongst agro-food processing firms and how network functions are translated into business performance. The findings indicate that agro-food processing firms value their sub-sectorial associations data were analysed using descriptive statistics. Results show that that small agro-food processing firms value their sub-sectorial associations. The findings also show that belonging to non-business-related associations is relevant in their business. This is however not the implication of getting direct assistance from these none related business associations. Therefore the study concludes that there is evidence of weak forward and backward linkage in the sub-sector because of poor linkages with rural farmers. The informal distribution channels are the most used in product and input marketing among the local and poor in Tanzania. It is recommended that dedicated public and private sector support on the development of small agro-food processing firms is called for the subsequent support of subsequent business and networking of the subsector. More importance should be given to local independent business organizations, local chambers of commerce and sub-sectoral associations in terms of the flexibility and efficiency of small agro-food processing enterprises

***Keywords**: Networks, perception, economic activities, agro processing firms, association membership.*

1. Introduction

It is increasingly accepted that the process of networking undertaken by owner–managers of small firms is integral to the natural way that small businesses are managed though networking. Moreover, networking is viewed as one means through which owner–managers of small firms market their goods and services .However, though there has been much attention directed toward the concept of small business networking, much less investigation has been applied to the contents of the network links, how these contents are realized through the process of networking, and how the resultant benefits can contribute to the small firm, specifically its marketing activities (World Bank, 2018).

Agricultural value added contributes more than 80% of the total manufacturing in Tanzania. However, only about 28% of the agricultural produce in the country is processed; Food processing accounts for 40% of the value added by agro-industries, and about 30% of the total manufacturing in the country However, the highest proportion of the installed capacity for food processing is for primary processing only (URT, 2016).

Tanzania is yet to make much progress towards adding value to primary agricultural commodities and exploiting the opportunities for processed agro-food products in local, regional, and international markets (Thomas, 2015). If agriculture is to be the main sector to stimulate economic growth then investments should go beyond improvement in on-farm productivity to also cover development of agro-industries and other postharvest segments of the agricultural value chains. In general have adequate production of food and a lot of spare capacity to produce more. The main problem is the limited and poor distribution of food in space and time caused by little or a lack of processing to increase the length of stable shelf-life of nearly all food commodities (UNIDO, 2009). This problem is much larger with perishable commodities such as starchy crops, livestock products, and fruits, and vegetables most of which are available in plenty in the areas of production but, even in these areas, only during the time of harvesting. This has narrowed the range of foods that are widely available in space and time, to only grains – leading to the artificial food shortages we face from time to time and from place to place. Small agro-processing firms are one of the most vibrant and sensitive sectors in Tanzanian economy. The significance small agro-processing firms is attributable to its capacity of employment generate on, low capital and technology requirement, use of traditional or inherited skill, use of local resources, mobilization of resources and exportability of products (URT, 2016).

Network plays a crucial role in modern life. The modern economy would be very much diminished without networks. Economic network theory has investigated a number of different exchange relations in networks and network actors (URT, 2016). The typical object of observation is an individual person or an individual institution that has durable information contacts, exchange relations, or both, with other people or with organizations such as firms, universities, or authorities. Whenever the person or institution under survey has more than one contact of this kind that can be analyzed, we are entitled to speak of a network and can conduct a network study.

Networking is important for agro - processors and stimulates the need for information, new markets, and technology in order to remain in processing activities. Personal contacts (networks)

is important for improving performance and reduce risk and uncertainty of small agro food processing firms since the government lacks enough capacity to provide functional institutional services for processing activities (Kuswantoro, Mohd, Radiah, and Ghorbani 2012).
Networks have become an important socio economic infrastructure for risk reduction and firm's performance enhancement. It refers to the pattern by which firms stick together. Networks are said to be redundant if firms in the network are not linked to others. Collective actions are easier in redundant ties because such ties create coherent groups with stronger interdependencies as shown in Image 1. This form of network is of particular importance to SMEs such as agro processing and MNEs relationship in the sense that MNEs can concentrate in the core segment of the production and subcontract the rest to SMEs (Uzor, 2009).

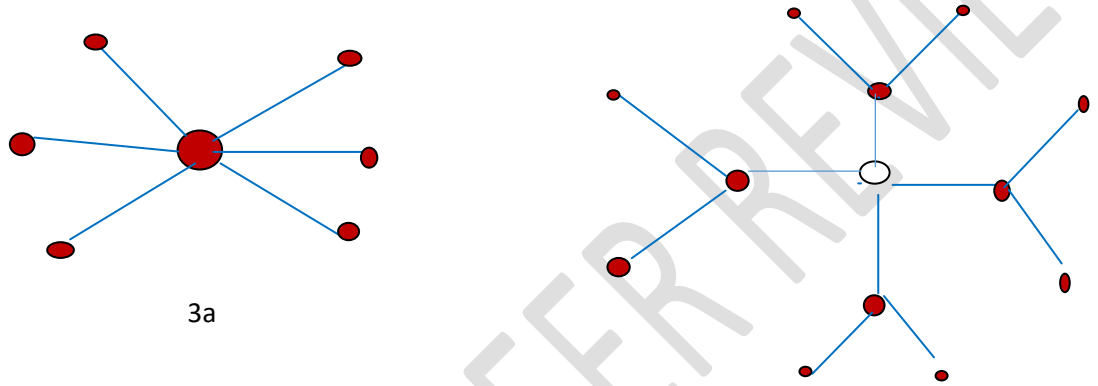

Figure 1: Redundant network structure
Source (Uzor, 2009)

The extent at which firms stick together in groups and in relation with other partners can result in to simple and complex web like network structures (Image 2). This is clustering in the sense that all firms are connected in one multi partner alliance structure. All members in the web like network structure may act as suppliers of knowledge. If one firm has a new project the other network members are invited to participate in the project (Uzor, 2009). This form of network is important to agro processors in the sense that they can be integrated in producing services or production of spare parts needed in an industry.

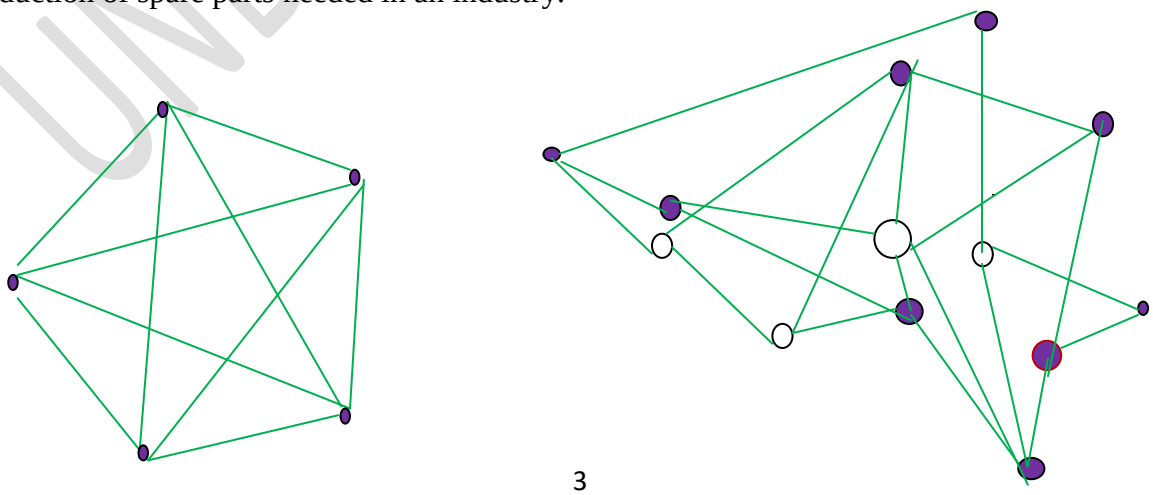

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Figure 2: Simple and complex – web like network structure
Source (Uzor, 2009)

Two main types of network are emphasized in the literature on small firm networks, in which are considered to be, based on either transaction or collaboration relations (Nijkamp, 2003). Transaction networks correspond to market-based relations formed on the buyer-supplier relationships in which a firm is engaged, which may be performed in a fairly routinized manner.

In contrast, collaborative ties correspond to processes that involve exchanges of information and knowledge transfer on matters as diverse as market, production or process development information and issues among firms that are based on kinship and acquaintance, and no financial compensation is typically involved. A feature of business networks that has arisen in economics addresses the spatial configuration of networks. Daniel Bond, and Magnusson (2012) considered business networks to be purely constructs, whereas other researchers have acknowledged that they are spatial constructs because the actors involved can be characterized by their location.

It is well documented that networks can be the basis of a rich information exchange that enables firms to learn about market opportunities with reliable partners. In complex situations, networks support managers to streamline information accurately and timely according to their specific needs. Technical information needed in production can be generated from engineers in the networks and raw materials and equipment can be sourced. Processors in developing countries like Tanzania find it difficult to score the performance of other processors due to high incidence of under-performance. Barr (2000) argues that if processors often use unavoidable circumstances as reasons for underperformance there is tendency that agreements can be reneged at will. Under such circumstances, networks can help to reduce uncertainty by helping to filter information about such situation and the integrity of others. In this respect, firm performance problem can be distinguished between malfeasances and unavoidable under performance in contract agreement. Networking can enable other groups or individuals not party to the contract agreement impose sanctions too (Barr, 2000). In this case, Granovetter (2008) argues that even when firms have access toformal legal systems, they often prefer to use their networks to enforce contract discipline. Networking offers small firms a reduced risk when entering into other markets networking can help overcome size inconveniences as it allows organizations to build relationships with established firms and so lessen the risk Connections with others allow SMEs to gain knowledge on foreign markets, access to required resources and capabilities, and assist them to reduce entry barriers.

Networks can also provide the framework for informal credit andinsurance arrangements. Risks in credit transactions in informal credit and insurance markets can be reduced due to free flow of information between borrowers and lenders. In Ghana, farmer-trader relationship helped to reduce uncertainty and income fluctuations of rural tomato farmers. The relationship provided a scenario wheresupply to traders is guaranteed during crop scarcity and traders guarantee to buy during output glut. Such relationship helped the tomato farmers secure credit from traders when banks reduced credit facilities to farmer in Ghana as a result of low repayment rates (Kuswantoro *et*

al., 2012). Networks can reduce transaction costs by helping in enforcing contract discipline in economic transactions thereby preventing the costs of litigation arising from breach of agreement. Networks also create the framework for assets specification in investments and protection of property rights. Networks contribute to poverty alleviation through sharing of information or educating the poor on how to overcome problems relating to income fluctuations and credit constraints and promoting market efficiency. For example, the cooperative farmers associations always share resources in the case of harvest failure. Rotational savings mechanisms provide the framework for raising investment funds (Fulya, Durmus, Deniz,., Dirlik, and Atalay,. 2011).

Small firms lack the necessary understanding of the need for research and development altogether. The specific requirements placed on research and development cooperation and the differences in technology hinder communication between science and industry. Another fundamental problem is also the firms 'lack of capital and human resources. Micro and small-size firms, with limited financial leeway, simply cannot afford the human resources, both quantitatively and qualitatively, that would be needed for the research and development activities. Networking influence strategic decisions through the exchange of resources among different members or by bringing in new ideas from within or outside the SME networks (Thomas and Slater, 2006). Utilizing networks also helps to build international contacts and find suitable agents and this affects market and product development selections and foreign entry mode choice. Accessing networks allows products to be integrated through affiliation with global brands, enabling firms to gain familiarity with the global business environment, including about their competitors and awareness of international standards, requirements, and quality.

Networks expose small firms to international markets through an accumulation of institutional, business, and export knowledge, which provide the necessary intelligence in support of the process. Networks can help businesses gain knowledge about foreign institutions so that they are aware of current rules and regulations. They also provide links to the conduct of business and market intelligence that help them decide when and how to export.

2.0 Materials and Method (Methodology)

The objective was to establish the influence of internal network on performance of small scale agro - food processing firms. Different approaches were considered in the empirical analyses on the influence of networks on small agro processing activities.The first approach is the analysis that focused on network functions. This helped the researcher to understand the behavioural patterns of processors and how networks support small agro food processing firm's activities. The methods of analysis covers different statistical analysis which involved computation of descriptive statistics such as frequencies, means, cross tabulations to present characteristics and distribution of respondents/ owners of firms in the aspects of networking studied.

The second approach is the analysis that focuses on different forms and structure of networks which exist in small agro processing firms. This provides the insight on the extent the contacts the processors made promote firms performance. In this context, the processors were asked to explain why they belong to associations and how they perceive the contact they make in the associations.

2.1 Description of the study area

A survey of agro – food processors was conducted in Dodoma, Morogoro and Singida regions (Figure 3). The areas play an important role in agro – food processing activities in Tanzania. These regions were purposively selected to represent other regions in the country where agro food processing plays an important role in their economies. From Dodoma and Singida two districts were selected, from Morogoro one district was selected as presented in Figure 6 from Dodoma region, Dodoma Urban and Kondoa districts were purposively selected for collection of detailed data on individual agro food processing firms because these districts have substantial presence of agro food processing activities. The same reasons apply for Singida Urban and Iramba District in Singida region and Morogoro Municipality for Morogoro region. Dodoma Municipality, Morogoro Municipality and Singida Municipality are regional headquarters; hence an ideal investor's choice for locating firms because of good services. Iramba and Kondoa Districts were selected to represent rural areas having dispersed agro food processing firms and extensive agricultural production activities that supply raw materials to agro food processing firms. Most of firms in rural areas of Kondoa, Iramba Singida districts represented dispersed due to the factors that firms are dispersed while that of urban areas in Municipalities asgeographically concentrated. Further firm types (according to products they produce) and size were used as means of analysing network functioning, structures and membership in different associations.

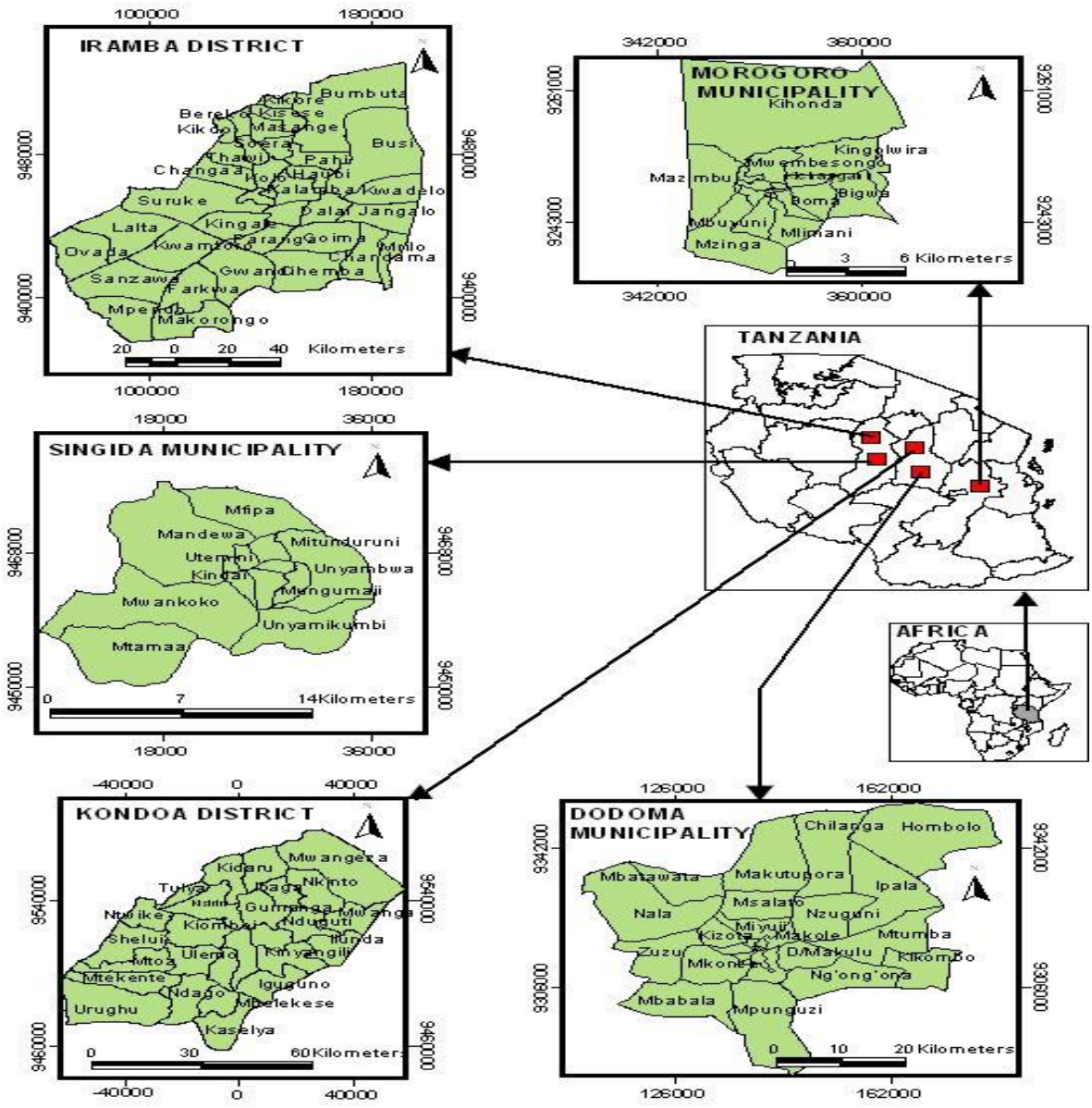

Figure 3: Map of Tanzania showing study regions and districts

2.2 The research design

This study employed cross - sectional research design to examine to establish the influence of internal network on performance of small scale agro - food processing firms. This research design gives a room for a researcher to carry out observation of all population or a representative sample at a specific point in time. The study employed quantitative and qualitative research approaches in data collection and analysis to explore the variables involved in the study. The combination of both qualitative and quantitative approaches allows for flexibility while

examining multiple factors in attempting obtaining pertinent information about the research problem at hand.

2.3 Sample size

There were 1028 registered small agro-processing firms within the selected districts from which the sample for this study was drawn. The sampling unit was an individual small agro-processing firm. The sample size was determined using the formula by Bartlet, Higins and Kotrlik (2001) and Malangalila (2009) who stated that for social sciences a sample size of about 10 percent to 13 percent is adequately representative. This study used 13 percent of registered firms, as computed according to Equation 1.

Purposive sampling was used to select key informants of agro food- processing firms. The use of managing directors/owners managers as key informants in this kind of study is a convention of small firms' research. SIDO regional and district officers, district trade and industry officers was selected. Using the sampling method proposed by Cochran *(*1977) with the formula:

$$n = N \times \frac{c}{100} \quad \text{..... (1)}$$

Where c is five percent of agro processing firms, N is the total number of agro- processing firms in the study area n is the number of selected agro processing firms. The total sample is estimated to be 134 which is 13 percent of the registered firms in the study area. The agro processing firms that are within the study area was surveyed. The study population consisted of employees and owners and the unit of analysis was firms. Thirteen percent of all the 1028 agro-processing firms in the study area were selected for the study. The population of the study therefore included small agro-food processing firms. The sample size consisted of 134 small firms .Using Equation 1 the sample size is presented in Table 1.

Table 1: Population and sample size of small scale agro-food processing firms in the study area

Strata	Population		Sample	
	N	%	n	%
Dodoma Municipality	289	28	38	28
Kondoa	148	14	19	14
Singida Municipality	288	28	37	28
Iramba	152	15	20	15
Morogoro Municipality	151	15	20	15
Total	1028	100	134	100

Source: Own survey data

2.4 Primary data and Secondary data

The primary data for this study was collected from small scale agro - food processing firms. Structured questionnaire were used to collect data from firm managers and workers. All interviews took place at their firms. Secondary data were collected to supplement primary data. Different secondary sources were visited to obtain data including Sokoine National Agricultural Library (SNAL), District councils, TRA, SIDO, Ministry of Industry and Trade, Ministry of agriculture, Tanzania Chamber of Commerce Industry and Agriculture (TCCIA), and National Bureau of Statistics and cluster officials.

2.5 Data Analysis

The descriptive statistical technique was used to analyze the data. The data to be collected by the instruments were quantitative in nature. The quantitative data were categorized, coded and analyzed according to the research specific objectives and research questions so that the frequencies and per percentages of respondents.

3.0 Results and Discussion

3.1 Network structures and functions of small agro- food processing firms

Findings in Table 2 show how the responses are translated according to firm type. It shows why small firms are likely to value networking and why networking with organization is very important. The findings show that 50.3 percent of the interviewees in agro food processors respectively access advice from financial institutions. Fifty five percent of respondents in small firms get advice from industry association. Access of advice from family and friends generally are perceived as very useful only by 47 percent of Small agro processing firms. Access to the market, access of advice from local business and access of advice to legal representatives are reported as 43.6 percent, 42.8 percent and 48.8 percent respectively.

Table 2: Opinion of small agro- food processing firms to network from different institutions

Indicator	Edible oil	Fruits and veg	Cereal milling	Total
	n=80	n=11	n= 43	n=134
Access of advice to industry association	58.5	72.7	55.5	55.0
Access of advice from financial institutions	50.0	9.0	59.2	50.3
Access of advice to legal representatives	51.4	63.6	59.3	48.8
Access of advice from family and friends	45.7	36.4	51.8	30.3
Access of advice from others in the industry	44.3	36.3	44.4	46.6
Access to market	45.7	54.5	37.0	43.6
Access of advice from local businesses	41.4	63.6	44.4	42.8

Access of advice to business consultancies	38.5	27.7	44.4	37.6
Access to credit	32.8	36.4	55.5	37.5

Source: Own field survey

Access of advice to business consultancies and access to credit were reported only by 37.6 and 37.5 percent of all small agro food processors in the study area. Most of the percentages are below 50.0 percent. Access of advice from others in the industry were reported by 46.6, while access of advice from family and friends is 30.3 This suggests that there is need to increase networking such as microfinance programs through government agencies, NGOs and donor assistance programme.

Figure 4 shows the structure and forms of networks of small agro food processing enterprises in the study area. The figure explains how firms are linked in production and their marketing outlets. Seven types of networks were identified, namely the input and output structures, linkages with large firms, and institutions marketing networks and technology (machinery) network. The analysis provides an insight into the impact of network structure on processing activities of the small agro food processing firms. 34.0 percent of oil processors, 27.0 percent of fruits and vegetable processors and 33.3 percent of cereal milling processors have marketing networking. Whereby 28.6 percent of edible oil, 18 percent of fruit and vegetable processors and 22.2 percent of cereal milling have access of machinery respectively. The findings further show that 34.3 percent of edible oil firms, 27 percent of fruits and vegetable processors and 37 percent of millers perform their activities of processing by sourcing their input from other sources like farmers. From the table about 35.7 percent of edible oil processing have raw material network, while about 27 percent of fruits and vegetable whereas 41 percent of millers perform their processing depending on raw materials networks. The respondents were asked whether they depend on output network in their processing activities, 41.4 percent of edible oil processors agreed to have this kind of network compared to 36 percent of fruits and vegetables, whereas that of cereal millers have 48 percent.

This results show that there is evidence of low backward and forward linkages in small agro processing firms. Forty two percent of small Agro foods processing in the study area channel their output through an informal marketing system. Firms market their products either directly to consumers or to traders without keeping records. Some processors- especially in sun flower have developed networking withfarmers such that orders of raw materials can be made on regular basis depending on the market demand of edible oil. The results is consistent with that obtained by ILO (2004)which emphasized on the need for government and public institutions to procure from small producers in the formal and informal sectors in order to increase productivity and as well stimulate employmentcreation.

The findings further indicate that 42 percent of the sampled edible oil firms, 42 percent of fruits and vegetables firms and 48 percent of cereal millers have linkages with institutions such as universities. The findings from the present study conform to observation made by Thomas *et al.* (2016) who argued that networking with institutions is one among important aspect in triple helix model revealing a balanced linkage between private sector, government and academia for high performance of SME under well-organized production factors, product markets, qualified customers

and specific suppliers.

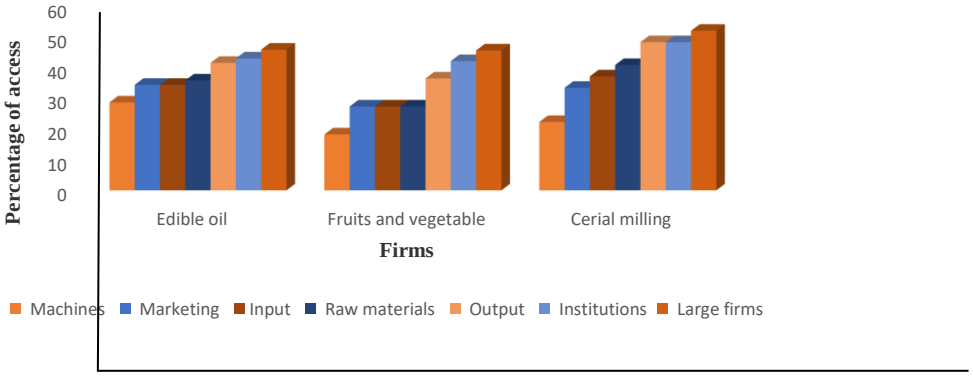

Figure 4: Forms of networks of small agro food processing firms by type
Source: Own field survey

Social activities and interactions are important aspects for agro food processors for making effective decision. They are the organizers and coordinators of resources such social interactions and networking serve as means of accessing business information for production decision making in their activities. As indicated in Table 3, about 18.6 percent of sampled processors belong to TASUPA as a sub sectorial association while 35.8 per cent and 23.8 percent are members of CEZOSOPA and MFPCI respectively, and 21.6 not members in any association.

Table 3: Agro processors membership in association

Association	Frequency	Percentage
TASUPA	25	18.66
CEZOSOPA	48	35.82
MFPCI	32	23.88
Not a member	29	21.64
Total	134	100.00

Source: Own field survey

This is consistent with CIP-2013 analytical report of URT (2016), that among the membership business support and private sector most of small firm's processors had the smallest proportion of membership. This suggests that processors value their sub-sectorial and business associations inadequately. TASUPA is an association formed by members of a group who are processing sun flower oil with the aim of serving the interest of their members.

Table 4: types of networks by sub-sector

Sub sectors	Type of Networks	Major effects of networks
Edible oil	Personal networks	Information on products, new markets and trade partners
	Organizational networks	No evidence of networking with large firms although they have formed associations such as TASUPA and CEZOSOPA

Cereal milling	Personal networks	Mainly for welfare, access to credit through their assets
	Organizational networks	Getting spare parts form manufacturers, informal marketing and supply of milling services to institutions
Fruits and vegetable	Personal networks	Welfare, information about traders raw materials, understand government policies
	Organizational networks	Depends largely on informal marketing and supply of raw materials
All sub sectors	Organizational networks	Lack of institutional support and poor infrastructure organized networks are very weak and informal in nature

Source: Own field survey

Table 4 shows forms of networks. The table indicates a higher density of personal interaction than organization network. This is arguably due to size effect of being small scale and lack of structural instutionalization. Therefore, small agro processors have to organize their processing and marketing lined up with their networking activities. Small firms networks are part of the measures and processors apply in their processing activities.

It is important that processors to relay more on their sub-sectors associations. Membership in business and non-business related associations can serve as means of establishing business relations and serve as the framework for community development and granting of trade credit and assessment of trade networks across local and regional markets. Similar results have also been reported elsewhere by (Sorvelli, 2008) indicating that firm's associations' membership is important for accumulation of social capital which is a glue for location development and strong networks.

3.2 Reasons for Joining the Associations as a Means of Networking

The interviewees were asked to give reasons why they join association such as TASUPA and CEZOSOPA. As shown in Figure 5, information about business partners, new markets, technical assistance and sources of raw materials are the major reasons for joining association. Majority of the interviewees value their networks as means of reducing search costs associated with product and input markets. Such information according to the interviewees is very important for firm performance. Furthermore, 48.5 percent of the interviewees reported as a means of accessing loans and credit while 41.7 percent consider source of technical information as the major reasons for membership in an association. The findings further show that 28.3 percent of entrepreneurs consider means of social contact and welfare as important reasons for membership in an association. It is shown that 26.8 percent consider source of information of new markets as a reason for membership in association. While 30.6 percent consider joining an association as important for assessment of trade partners. The findings therefore suggest that membership in an association help small entrepreneurs in finding solutions to internal and external problems concerning their business activities.

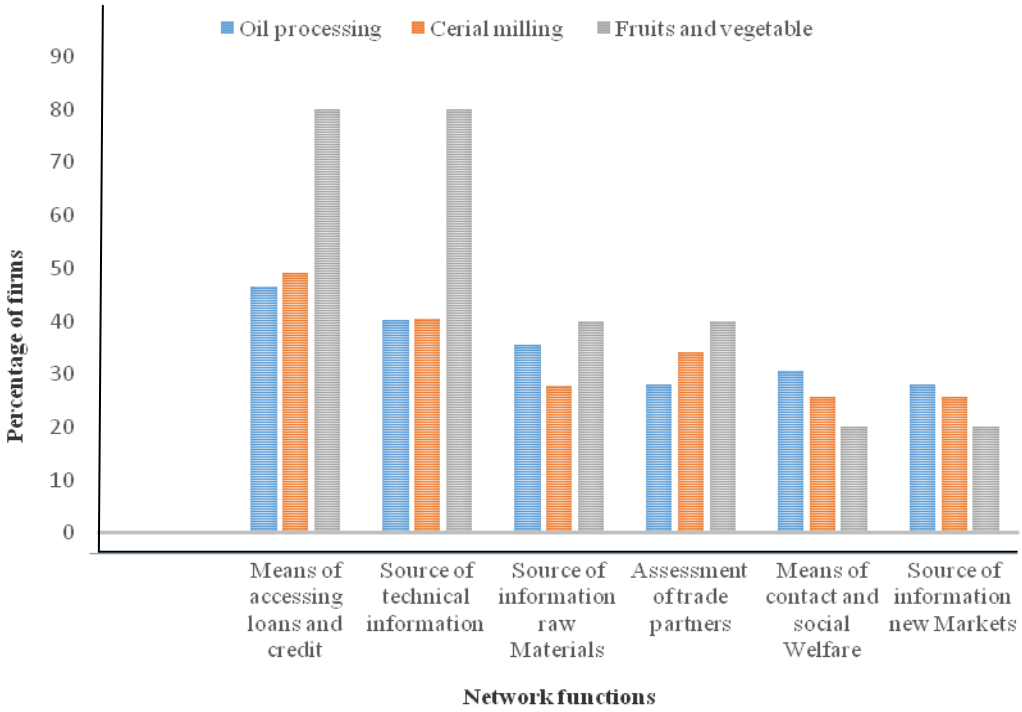

Figure 5: Reasons of joining associations for agro-food processing firms
Source: Own field survey

To ascertain whether the networks have direct relevance to agro processing activities, processors were asked how strongly relationships with different bodies have in their business activities. Figure 3 indicates that 16 percent of interviewees in oil processors have relation with universities while 23.4 percent of interviewees in fruits and vegetables and 20 percent of cereal millers have relationship with universities.

The findings show that 30 percent of small agro- food processing firms in the study area have relations with public bodies such as local governments, while 23.17 of oil processors and 18 percent of fruits and vegetable processors have relations. The relationship with trade associations in the sampled firms is 21 percent for oil processors, 23.4 percent for fruits and vegetable processors and 20 percent for cereal milling.

The findings further reveal that only 3 percent of sampled oil processors, 5.5 percent and 15 percent of cereal millers have relation with large industries. Only 6 percent of the sampled vegetable oil processors have relations with financial institutions, 16 percent of cereal millers have relation with financial institutions whereas 4 percent of cereal milling has relationship with financial institutions. The relationship with media is one of important for modernized performance of small agro- food processing firms. The findings show that only 7 percent of oil processors, 4 percent of small firms and 15 percent of cereal milling processors have relationship with media. The results suggest that communications between institutional partners, SME and public bodies are very low therefore causing low performance of small agro- food processing firms. Nissan *et*

al. (2011) have similarly argued that, interacting in specific operations like markets and technological innovations are continuously encouraged.

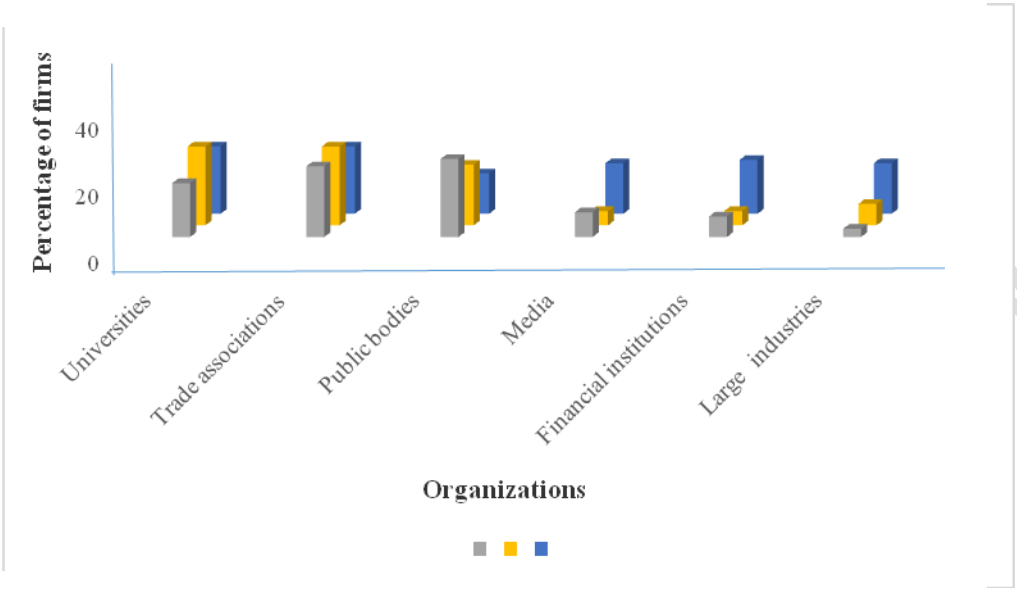

Figure 6: Relationship of small agro- food processing firm with different organizations
Source: Own field survey

Figure 6 presents the general findings of small agro food processing firms marketing network activities in Morogoro, Dodoma, Kondoa, Singida, Iramba districts whereby 36.5 percent of owners adhere to formal planning. This is an indication that small firms marketing is being reactive rather than proactive with little or no planning involved in their activities. From this study it was revealed that 37 percent of processors keep existing customers. This is an indication that small agro food processing firms are typically dependent upon small number of customers. This supports findings by Hills *et al*. (2008) that small number of customers in small firms 'causes extra costs and greater efforts to satisfy preferences of their existing customers. Acquiring new customers through word of mouth was recorded only by 35 percent of respondents revealing that small agro food processing firms are faced with the problems of low expenditure on promotional activities as advertising is frequently not practiced because of being expensive.

Similar results have been established by Cameron, (2010), Carson *et al.* (1995) where small agro processing marketing networking although continue to be a subject of interest to researchers as while no steadfast conclusions have been reached as to why so many firms fail. It is widely accepted that a lack of this of market networking activity can partially account for small firm's failure.

In the case of gathering information about customers, there is evidence that small firms do not carry out formal marketing. This is reflected by only 33 percent of owner manager who reported that they gather information about their customers through verbal exchange. About 32 percent of respondents have knowledge on how to manage limited resources.

This indicates that small firms are usually subjected to severe resource constraints; cash being considered a key resource constraint because have many implications in attracting workers with requisite skills. Providing product of high quality is considered a key factor in achieving competitive advantage of small firms. According to the findings 31 percent of owner-manager recognizes the importance of product quality and those ideas for new products and adaptation to existing products comes from personal interaction with existing customers. Further the results show that 28 percent of owner-manager gain information about their competitors through their employees, customers, followed by 23 percent who have idea of managing delivery of their product. The low percentage is an indication that this is the most difficult marketing networking activity for small firms.

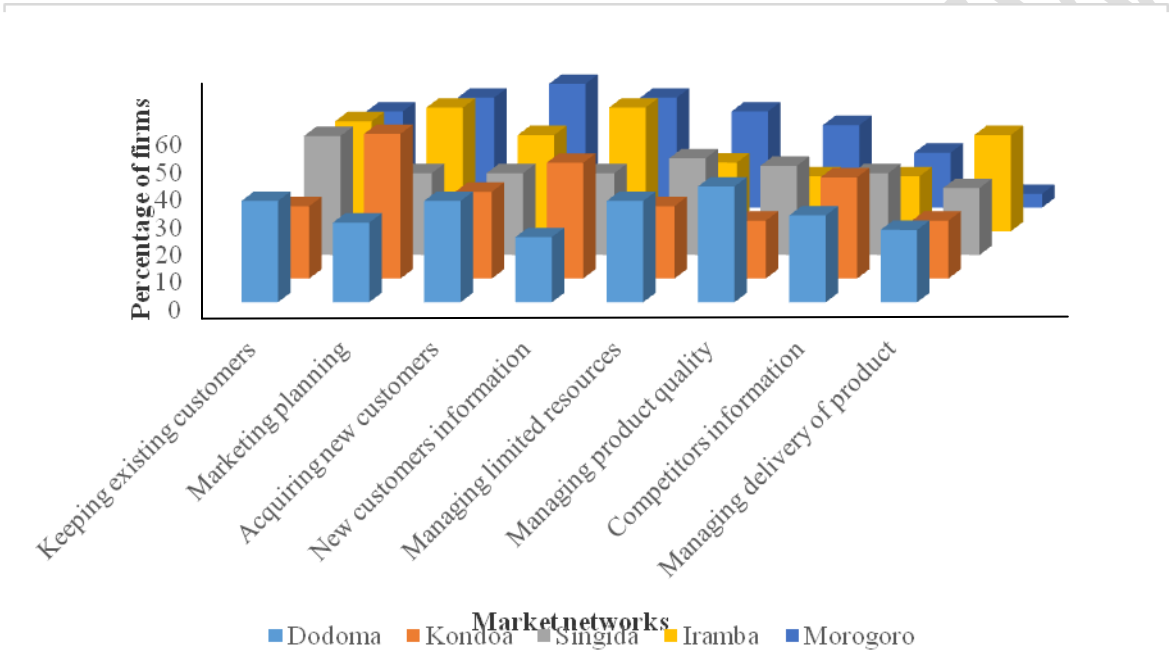

Figure 6: Market networks in sampled small agro- food processing firm
Source: Own field survey

3.3 Perception of Agro- Food Processing Firm Owners on Public Private Partnership as a Means of Networking

The psychology of agro processors on firm's networks between public and private sectors was determined through asking their perception to see whether there is a connecting link with value addition. Results in Table 5 reveal that 23.8 percent of small scale agro- food processing owners appreciate the exertion of the government to encourage linkage between Multinational companies, local SMEs and rural farmers.

While 30.6 percent are not sure and 45.5 of the respondents do not appreciate the efforts of PPP The small number of people who agreed that the government efforts is an indication that there is low trust and transparency of processors to those efforts. Improvement of farmers and processors to access to credit by the government was suggested by 15.6 percent while 39.5 percent are not

aware and 44.8 percent of the firm owner's disagreed on the efforts. The results reveal that there is limited access to credit therefore limited capacity of the people to start and operate agro processing activities.

The potential for agro-industrial development in the developing Tanzania is largely linked to the relative abundance of agricultural raw materials and low-cost labour in most of them. The most suitable industries in such conditions are indeed those that make relatively intensive use of these abundant raw materials and unskilled labour and relatively less intensive use of presumably scarce capital and skilled labour. This can be successful if the government is fully involved in the assurance of raw materials from different sources. The survey revealed that 32.8 percent of agro-food processors firm's owners cited good guarantee of the government on the issue of raw materials supply to processing firms. Industrialization of agriculture and development of agro-food processing industries is a process which is generating an entirely new type of industrial sector including a good supply of raw materials.

Local capital markets are important for the development of agro- food processing firms. The results show that, 31.3 percent firm owners agreed the government strengthens capital markets through mobilization of domestic markets while 37.3 percent were not sure and 31.3 percent disagree about the issue. This suggests that the capital markets appear to be not well developed enough to provide the financial funds needed for the modernization and consolidation of food processing firms.

The small agro- food processing sub sector accounts for over 80 percent of all firms in Tanzania. However, the firms have not been effective in absorbing new labour in the market, as reflected by the unemployment rate, which increased form 5 percent in 2001 to 10 percent in 2011, hence requiring the government to act for reducing the unemployment rate in the sub sector. The survey asked the small firm owners whether the government encouragement of agro processing employment for income generation was promising. The results suggested that 17.1 percent agree and 34.3 percent was not sure, while 48.5 percent do not appreciate.

Tax incentives, land use and access to modern equipment are essential to improvement performance and therefore growth of small agro- food processing firms. During the survey firm owners were asked to give the perception on these policy issues. About 23.1 percent agree that the government apply tax incentives, land use and access to modern equipment, while 34.3 percent are not sure and 42.4 percent disagree. This is an indication that the general policy framework of the Government concerning this issue has little control. It is seen from the table that the involvement of private sector to improve increased access to credit to food processors only 11.9 percent of firm owners agree while 37.3 percent are not sure and a substantial number 50.7 percent do not see the efforts done by private sector.

The survey also asked the firm owners whether they are aware and appreciate the efforts of private sector to mobilize Foreign Direct Investment (FDI) with domestic investment of agro food processing firms. The results revealed that 0.75 percent appreciate, while 31.3 percent are not sure and a large number of respondents 67.9 percent disagree. This reveals agro-processing industrial units have weak linkage with multinational companies where managers can benefit by tapping into a wider range of knowledge sources via diverse and active involvement in exporting

and investing activities. The policy implications suggest that government policies as well as triple helix cooperation should be oriented not only towards attracting foreign interest, but also towards building opportunities for more extensive regional and international business networking by exporting and outward FDI. Despite vital significance of agricultural sector for the livelihoods of billions of people across the developing world, the flow of FDIs leaves this sector relatively untouched.

Effective methods of marketing and distribution channels of inputs and processed products are one of important aspect of PPP as a means of networking in agro- food processing activities. The results show that 22.4 percent of firm owners cited to agree, and about 35.1 percent are not sure and 42.5 percent disagree. This suggests that there are poor marketing channels of inputs hence irregular supply of raw materials at cheap rate do not exist for the smooth running of agro-processing firms. This is an indicative of the absence of a strong raw material base for these firms in the study area.

Table 5: Perception of firm managers on PPP in agro food- processing activities (n=134)

Statement	Agree	Not sure	Disagree
Government encourage food processing linkage between MNC, local SMEs and rural farmers	32(23.8)	41(30.6)	61(45.5)
Improve farmers and processors to credit	21(15.6)	53(39.5)	50(44.8)
Guarantee raw materials supply	44(32.8)	47(35.1)	43(32.1)
Government strengthens capital markets through mobilization of domestic markets	42(31.3)	50(37.3)	42(31.3)
Government encourage agro processing employment for income generation	23(17.2)	46(34.3)	65(48.5)
Government apply tax incentives land use and access to modern equipment	31(23.1)	46(34.3)	57(42.5)
Government invest in rural infrastructure and domestic investors	16(11.9)	35(26.1)	83(61.9)
Private sector improve increased access to bank credit to food processors	16(11.9)	50(37.3)	68(50.7)
Private sector mobilize FDI with domestic Investment	1(0.7)	42(31.3)	91(67.9)
There is effective methods of marketing and distribution channels of products	30(22.4)	47(35.1)	57(42.5)
There is enough research institutions and skills development	4(2.9)	38(28.3)	92(68.6)
There is well integration of environmental agencies and waste disposal firms	0(0.0)	20(14.3)	114(85.1)

Note: SA= strongly agree, A= Agree, NS= Not sure, D= Disagree, SD= strongly disagree, numbers in parenthesis are percentage

Source: Own field survey

Strong research institutions and skills development is an important factor influencing development of agro - processing industry in developing Tanzania. Only 2.9 percent of firm owners agree that there is enough research institutions and skills development. The survey also revealed that 28.3 percent are not sure and huge number 68.6 percent give their view that there are weak research institutions. The results reveal that firm owners do no support the response that there is well integration of environmental agencies and waste disposal for firms and 14.3 percent are not sure while a substantial number 85.1 percent cited weak environmental agencies and waste disposal. This is an indication that most of agro- food processing firms perceive

environmental improvement as costly. As they are primarily concerned with short-term economic survival, they are not motivated to use environmental conservation measures in their processing activities.

4.0 Conclusions and Recommendations

The study was conducted to highlight the influence of networks on the performance of small agro-food processes. The article also highlights what needs to be done to ensure that a subsector contributes more by improving performance and generating revenue. The structure of the network of small agro-food processing companies proves that there is a low degree of links between small agro-food processing firms. At the same time, most small food processing companies had the lowest proportion of members, which means that processors inadequately value their sub-sectoral and business partnerships. Finally, the study concludes that communications between institutional partners, small agro processing firms and public bodies are very weak causing low performance.To address this issue, it is appropriate to give more importance to local independent business organizations, local chambers of commerce and sub-sectoral associations in terms of the flexibility and efficiency of small agro-food processing companies. This should be done through networking to revitalize the agro-food industry and public sector networks to promote trade cooperation and create the conditions for the creation of more networks of small agro-food processing firms. It is a well-founded, well-documented material that offers solutions to certain specific problems in these sectors.

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