INNOVATIONS

Analysis of marketing system for garlic traders: in the case of Shashamane and Kore cities in Oromia regional state, Ethiopia

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Abstract

This research attempts to examine Garlic marketing in Shashamane and Kore city of Ethiopia with the specific objectives of identifying marketing channels, and the role of marketing agents. It also aims to quantify costs and margins for key marketing channels and identify constraints of garlic marketing. The structure, conduct, and performance approach was used to examine Garlic marketing channels and the function of marketing agents. This survey also examines Demographic Variables of the Garlic marketing participants using Mean, standard Deviation, Standard error, t-test and chi-square test. Shashamane and Kore markets were inefficient and dominated by oligopolistic market structure, concentration ratios were 79% and 61%, respectively. the market structure demonstrates that while licensing, trading experience, and capital did not prevent entry into the garlic business, while education was one of the bottlenecks to entry market. Profit margins for Traders for urban assemblers 7.2% and 19%, farmer trader 14% and 21.2%, regional wholesaler 19.5% and 13.5%, urban wholesaler 20.6% and 25.5%, and retailers 11% and14.3%in Shashamane and Kore respectively.in order to diminish the oligopolistic market, structurean effective market information service should be established to provide traders with accurate and timely information on current garlic output, demand, and prices at the national, regional, and district levels.

Key word- 1. Channels 2. Market 3. Concentration ratio 4. Margins 5. Traders 6. Conduct 7.Performance 8. Garlic and Cost

1. Introduction

According to (Abadi, 2015), Garlic is thought to have originated in Asia and spread to other parts of the world through trade and colonization. Garlic is strongly related to other plant species such as leeks, shallots, hives, and onions. It has been used as a food ingredient and a conventional medicine since ancient times, Garlic production in the world amounted 28,494,130 metric tons in 2018. China was the largest producer, it accounting for more than 78% of global production at 22,273,802 tones. According to this data, India is the world's second largest garlic producer, it accounted for 1,721,000

metric tons of the total global garlic production. In Africa Egypt is leading producer of garlic, with a total production of 286,213 tones, backed by Ethiopia, with a total production of 124,837 tones, but Ethiopia global production share is negligible in spites of agroecologist of country. garlic has medicinal value and Many people value garlic for its numerous medicinal properties. It is recommended by traditional healers for the relief of pain, agony, common colds, chills, and aches. Garlic is one of Ethiopia's most important vegetable crops, and it is used as an ingredient in the local stew "wot" as well as in the formulation of local medicines.

According to (Dessie & Mulat, 2019), Garlic is used as a cash crop to earn foreign currency through exports. During the off season, the same amount of garlic is usually sold for ten times the price of an onion in Ethiopia. The growing proportion of the population living in cities, combined with rising income levels, necessitates more organized channels for processing and distributing agricultural products. Furthermore, agricultural marketing will serve as a coordinating rule, steering supply and demand in terms of location, time, and form utilities. A properly functioning agricultural market is widely regarded as the best organizational structure for achieving more efficient production in terms of type, quantity, and quality, as well as consumption decisions. it encourages traders to move produce profitably from an excess supply to a deficit market.

primary objectives of this research to identify marketing channels, and the role of marketing participant in all Garlic marketing and to quantify costs and margins for key marketing channels Garlic marketing in the study areas.Garlic marketing system in Ethiopia is hampered by variable seasonal conditions. Shortage in supply on the rural and urban markets. Furthermore, garlic marketing system and their characteristics have not yet been studied and analyzed for various parts of the country, particularly Shashamane and Kore cities.

2. Methodology

Description of the Study Areas

According to (Berhan, 2020), Shashamaneis a town in West Arsi Zone, Oromia Region, Ethiopia. about 150 miles (240 km) from the capital of Addis Ababa. It has a latitude of 7° 12' north and a longitude of 38° 36' east. Shashemenetotal population was 250, 000 and an average grow of about 4.5% per annum.Shashemane was established in 1910/1911. The area was previously used as a pathway of trade caravan routes for southern Ethiopian region.

(District, 2020)Kore is one of the small city inKore District, west Arsi zone,Oromia Region's Ethiopia's. It is named after the district's administrative center Kore. According to the 2007 national census, this district had a total population of 103,734, 10.2% of its population, lived in cities.

Here Map Cities

Source and Data Requirements

Primary and secondary data were used in the study;Primary data were gathered through the use of questionnaires from the traders and Key informant, a representative sample was selected using systematic random sampling, from urban assemblers, farmer traders, wholesalers (urban and rural), and urban retailers. From total of 160 garlic traders the researcher selected 49 traders.

Method of Data Collection

The formal survey used pre-tested semi-structured questionnaires to conduct formal interviews with randomly selected traders.In addition to the questionnaire survey, an informal survey in the form

ofKey informant traders, and relevant experts from both city government organizations participated in the discussions.

Methods of Data Analysis

Descriptive statistics analysis was used, such as of ratios, Parent, ages, means, t-test, x2 test variances, standard deviations and Structure, conduct and performance (S-C-P) model, resource ownership, role of intermediaries, market and trader's characteristics is referred to as data analysis method.

Structure conduct and performance (S-C-P) model

The model examines the causal relationships between market structure, conduct, and performance, in agricultural marketing and economics, the most frequently used model for evaluating market performance is based on the industrial organization model.(Wolday, 1994 citing Meijer, 2015).This study also used this model to evaluate garlic market in Hasasa and kore district.

3. Results and discussion

As per the survey results, the mean of sampled traders age were 42.1 years old. mean of age for sampled in Koretraders were41.2 years old. While, Shashamane, 44.76 so. Kore traders were younger than Shashamanetraders, the independent sample t-test analysis revealed that the mean of age two area was statistically significant at the 5% significant level. the overall average family size in each household is 4.02 members. Data also show that the average family size in the Koreand Shashamane markets was 4.32 and 3.62, respectively. The independent sample t-test revealed that the difference in family size was statistically significant at the 10% significance level between the two areas.

The overall traders had 5.78 years of experience on the averageKore wereless experienced than Shashamanetrade which was 5.62 and 5.89 respectively.The independent sample t-test revealed that the difference in years of experience on the average was statistically insignificant at any significance level between the two areas.71.4% of the overall sampled traders were males, while 28.6% were females, and 52.3%, 85.7% of the traders in Kore and Shashamane were males, respectively. the chi-square test results show a significant difference in sex distribution between markets at the 5% significance level.About 74% of traders were Muslims, with Orthodox and Protestants accounting for the remaining 22.5 and 6.1%, respectively. the chi-square test, there is a 10% significant difference in religion distribution between the markets.

According to the survey results, 83.6% of the traders responded to the survey were married, while 16.4% were single. The chi-square test results show that difference is statistically insignificant betweenthe two area. and at last more than 93% of thesample traders are within the levelRead & writeto secondary school education, and only 6.3% of the traders are joined higher learning institutes.The chi-square test showed that there is a statistically significant difference on educationlevel between the two areas at 10% significance level.28.6%Kore market sample traders reported having a place to store, while 32.8% of Shashamane market sample traders reported having a store.thechi-square test place to storestatisticallyinsignificance.

Nearly 76.2% and 60.7% of sample traders in kore and Shashamane own bicycles, respectively. only 30.6% of traders in both study areas owned a vehicle. In terms of equipment, 93.9% of the surveyed traders own a weighing scale, while the remaining portion borrow one from another trader. Only 57% and 52.2% of traders used hand pool carts and pack animals to transport garlic from the collection point to the market, respectively. For both hand pool carts and pack animals the chi-square

test showed that statistically significant difference, between the two areas at 10% significance level. 97.7% of the sample traders had a shop and 57% had a gathering place in the market. The chi-square test revealed a statistically insignificant difference between the two variables.when the sampled traders started their businesses, they had an average initial working capital of Birr 3,336.7. The survey also shows that the majority of the working capital is obtained from internal and external sources. About 47% of the sample traders confirmed that they used their own funds, 39% used personal loans, and the remaining 14% used bank and micro finance.For both of themthe chi-square and t-test are a statistically insignificant, respectively.

According to survey result. The average number of family employees is greater than the average number of non-family employees, which is 1.08 and 0.10. This simply means that the garlic trade is a parent's business.thet-test showed that there is a statistically insignificant difference, between the two areas at any significance level.

About 63.3% of traders reported a lack of capital to conduct and expand their business. This is due to a lack of lending institutions, religious issue especially for Muslim are reasons for capital shortage. The chi-square test for the two areas' capital shortage statistically insignificant.94% of them reported a demand problem due to a lack of buyers, a surplus of garlic in other parts of the countryand low garlic quality due to disease and transportation issues. The chi-square test result for the demand problem in the two areas was statistically significant at the 5% significance level.63.3% of traders complain that the government did not support (did not focus on) the garlic trade by building storage facilities and credit facilities. The chi-square test result for the absence of government support problem in the two areas was statistically insignificant at the any significance level. Traders also complain about being forced to pay annual tax even though their business is only for a few months. About 32.6% of them are facing a supply shortage as a result of plant disease and a large number of buyers in the specific market. The chi-square test for the two areas' supply shortage problem was found to be statistically insignificant.

Access to credit was identified as a limiting factor in sample traders' operations and business expansion. The inability of microfinance and banks to obtain loans is caused by a lack of collateral. Even if credit is available, the complexity of the process to obtain credit from micro finance, as well as the high interest rate, discourage loans. Despite the fact that 48% of those polled reported receiving all types of credit. The chi-square test result for the two area statistically significant at the 10% significance level.63.3% of farmers are hesitant to sell their produce on time due to a lack of real price information, a low price offer, and the low quality of garlic fetched a low price. The chi-square test result for the farmers' reluctance to sell their produce in the two areas was found to be statistically significant at the 1% significance level.

Another infrastructural issue is that village markets are linked to district town markets via poorly paved roads. Human portages and pack animals are the most commonly used modes of transportation for larger loads. During the rainy season, many of the roads to the village markets are impassable to vehicles. about 61.2 % of traders reported a transportation issue. Trucks will stay on the road for up to four days if the road is muddy. In such cases, traders are forced to pay exorbitant transportation costs in order to cover the time cost. according to the results of the chi-square test for the two areas' transportation problems, which were found to be statistically significant at the 10% significance level.

3.1 Market channel

According to(Mendoza, 1995), a marketing channel is the chain of intermediaries that transports whole garlic from farmers to consumers. The purpose of marketing channel analysis is to provide a

systematic understanding of the flow of goods and services from their producer to their final consumer.informal survey show that, farmers may be able to sell their products directly to consumers and retailers. However, this study mainly focuses on traders there are seven major marketing channels

Channel 1 Farmer >>>>Regional Wholesaler>>>>Retailer>>>>Consumer

Channel 2 Farmer>>>>Regional Wholesaler>>>>Urban Wholesaler>>>>Retailer>>>Consumer

Channel 3 Farmer>>>>Urban Assembler>>>>Regional Wholesaler>>>>Retailer>>>Consumer

Channel 4 Farmer>>>>Urban Assembler>>>Urban wholesaler>>>>Retailer >>>Consumer

Channel 5 Farmer>>>>Urban Wholesaler>>>>Retailer >>>>Consumer

Channel 6 Farmer>>>> Commission agent>>>Regional Wholesaler>>>Retailer >>>Consumer

Channel 7Farmer>>>>farmer traders >>>Regional Wholesaler >>>>Consumer

Total garlic being marketed in Shashamane and Kore city was 47,629 quintals, during the main season (CSA,2020). the main players and their market share were urban assemblers, farmer traders, and regional wholesalers in proportions of 34.7%, 28.5%, and 20.4%, respectively. Urban Wholesaler supplied 12.2%and Commission Agent 4.2% of produce.

3.2. Market structure

Food market structure is examined in terms of the number of buyers and the sizes of enterprises within the system, the degree of market transparency, and the conditions of entry and exit from trade (Scarborough and Kydd, 1992; Pender et al., 2004) cited in (Melaku Haile, 2012).

Concentration Ratio

The four largest traders in shashamane handled 79% of the total volume of purchased garlic. in Kore markets it handled 61% of the total volume of purchases.Using the market structure criteria proposed by Kohls and Uhl (1985), as cited in (Melaku Haile, 2012), the garlic market in Shashamaneand Kore is strongly oligopolistic. Because a few traders appear to have monopolized the market, this suggests that there is market imperfection.

Market Transparency

Only 41%and 49%of Koreand shashamane traders have reported as they have adequate, timely, and reliable information in the study area, respectively the market in the study area is characterized by a lack of transparency in timeliness and reliability. As a result,shashamanetraders have a more advantage in terms of information access than Kore traders. In these cases, the main issue in the garlic market was a lackof equal market price information.

Barrier to entry

Source of working capital: According to the survey results, the majority of garlic traders (47%) had their own source of capital for their respective trading activities, while 39 % of the traders got from their personal loan. the remaining 14% of traders borrowed money from banks and microfinance institutions. This indicates that working capital does not appear to be a barrier to entry because the majority of garlic traders had their own working capital.

Level of Education: About16.3%, 59.1%, and 18.3% of sample traders can Read & Write, receives primary and secondary schooling, respectively. Nearly 6.3% had enrolled in higher education This

suggests that formal education appears to be a barrier to entry, as the majority of garlic traders had formal education

Experience: the majority of the traders have not been in the garlic trading business for more than 6 years. about 69.4%, 24.5%, and 6.1% of the surveyed traders had 1-6, 7-10, and 11-16 years of business experience, respectively. The majority of traders in the sampled markets had between one and six years of experience. This could explain that there is no barrier to entry in the garlic trade in terms of years of experience.

Licensing Procedure: About 41% of the sampled traders had a garlic-trade license, while 59% did not. as the majority of traders operating in the study areas lacked a garlic-trade license; thus, it appears that there was no restriction to entering the garlic markets in relation to a garlic trading license.

3.3Conduct of garlic market

Market behavior refers to the patterns of behavior that firms adopt or adjust to in the markets in which they sell or buy (Max Raible, 2013). The conduct of the garlic market is examined in this report in terms of traders' price setting, purchasing, and selling strategies.

Traders price setting strategy

About 61% of the sampled traders set their own purchase price, 11% reported that their price is set by the market, 15% reported that their price is set by negotiation, and the rest reported that the price is set by traders from shashamane, wholesalers, and brokers.

Traders purchasing strategy

Regional wholesalers, farmer traders and urban assemblersare very activethey accountfor 20.4%, 28.5%, 34.7% of their supply, respectively. Traders are highly mobile, purchasing from various markets throughout the week. In 2020, one trader visited more than one regional market per week on average. Urban assemblers and regional wholesalers visited 1 to 4 markets per week more than other traders.About 62% of traders buy directly without using a broker, 27% buy through brokers, and the remaining traders buy through a combination of direct purchase, commission agents, and brokers. However, informal survey indicate that traders manipulate the weighing scale, and it appears that all traders are speaking the same language, cheating a minimum of 10 kg per quintal.

Traders selling strategy

Brokers are extremely important to regional wholesalers and urban assemblers when it comes to selling. About 35% of traders use the services of brokers when selling, particularly in the kore markets. About 53% of them reported being personally in charge of sales, with the remaining 12% selling through a combination of the two methods.

3.4 Performance of the market

Marketing margins, taking into account associated marketing costs for key marketing channels, were used to analyses garlic market performance. channel actors costand the margin at regional wholesaler, farmer trader, urban assembler, retailer, commission agent, and urban wholesaler level, a study was carried out.

Table 1. Summary of marketing cost, margins and profit of traderspер birr per quantal in Kore

Cost Items		Cost and prices	Gross marketing margin	Total marketing cost	Profit margins	
					Amount	As % of cost price
Farmer trader						
	Average buying price	14,000	398.25	98.25	300	21.2
	Total marketing cost	98.25				
	Cost price	14,098.25				
	Average selling price	14,398.25				
	urban Assemblers					
	Average buying price	14,398.25	357	107	250	19
	Total marketing cost	107				
	Cost price	14,505.25				
	Average selling price	14,755.25				
Regional Wholesaler						
	Average buying price	14,755.25	370.5	116.5	253.25	13.5
	Total marketing cost	116.5				
	Cost price	14,872.5				
	Average selling price	15,125.75				
Urban Wholesaler						
	Average buying price	15,125.75	477.75	114.5	363.25	25.5
	Total marketing cost	114.5				
	Cost price	15,240.25				
	Average selling price	15,603.5				
Retailers						
	Average buying price	15,603.25	267.25	69.5	198.5	14.3
	Total marketing cost	69.5				
	Cost price	15,672				
	Average selling price	15870.5				

Source: Survey result, 2020

- GMM (Farmer trader) 21.2%
- GMM (urban assembler) 19%
- GMM (Regional Wholesaler) 13.5%
- GMM (Urban Wholesaler) 25.5%
- GMM (Retailers) 14.3%

Table 2. Summary of marketing cost, margins and profit of traders per birr per quantalinshashamane

Cost Items		Cost and prices	Gross marketing margin	Total marketing cost	Profit margins	
					Amount	As % of cost price
Farmer trader/						
	Average buying price	14,000	350	96.5	253.5	14
	Total marketing cost	96.5				
	Cost price	14,096.5				
	Average selling price	14,350				
	urban Assemblers					
	Average buying price	14501	242	110.5	131.5	7.2
	Total marketing cost	110.5				
	Cost price	14611.5				
	Average selling price	14,743				
Regional Wholesaler						
	Average buying price	14,450	460	107	353	19.5
	Total marketing cost	107				
	Cost price	14,557				
	Average selling price	14,910				
Urban Wholesaler						
	Average buying price	14,743	486	114.5	371.5	20.6
	Total marketing cost	114.5				
	Cost price	14,857.5				
	Average selling price	15229				
Retailers						
	Average buying price	15,229	266	68.25	197.75	11
	Total marketing cost	68.25				
	Cost price	15,297.25				
	Average selling price	15495				

Source: Survey result, 2020

- GMM (Farmer trader) 14%
- GMM (urban assembler) 7.2%
- GMM (Regional Wholesaler) 19.5%
- GMM (Urban Wholesaler) 20.6%
- GMM (Retailers) 11%

4. Summary, conclusions and recommendations

Summary and Conclusions

Despite the country's large potential for garlic production,comparative advantages such as proximity to national marketand cheap labor are opportunities. its contribution to economic development has been extremely low for a variety of reasons. The most frequently mentioned reasons are a lack of an organized market system, production that is too traditional, inadequately supported by scientific recommendations,lack of capital and credit availability, excessive margins primarily due to inefficient market system and costly transportation due to lack (low access) of infrastructure, provision of extension packages, a lackoforganized garlic market information, inadequate

government interventions and support, a lack of market regulations and legislation, and The product is not yet certified in the study areaetc. As a result, garlic marketing requires special consideration in any ongoing or agricultural development strategy.The research result also indicated the existence of seven garlic channels in in both cities. Producers-Consumer channel was important to producers and consumers to get acceptable prices; while Producers-Urban Assembler -Retailers-consumer channel, Producer- Farmer trader -Retailer-Consumer channel and Producers-Regional Wholesaler-Retailers-consumer channel was the most important channels in terms of total volume marketed for garlic.As a result, a number of actions must be taken to promote the development of the garlic market system. This includes activities such as capacity building, technological applications and optimized extension. Infrastructural development is also critical to the success of the sub-sector. In this arena, emphasis should be placed on improved storage and transportation systems, as well as the provision of credit and other services to improve garlic marketing performance.

Recommendations

In general, traders can obtain price information from a variety of sources, most traders rely on other traders and government extension staff for the same information. As a result, there is a great need to respond to this contest by making information available to traders at the right time and place; it is also beneficial for developing an integrated agricultural marketing information system that will be linked to cities information systems.Agricultural marketing information system had a positive and significant impact on the production and supply of garlic and its market performance. According to the study's findings, providing extension services improves the market system. It is also beneficial to enlighten farmers on how to produce based on market signals and consumer preferences, as well as to direct or advise on proper methods of handling, storing, transporting, and, most importantly, improving garlic quality. As a result, it is advised to assign an efficient extension system, as well as to update extension agents' knowledge and skills with improved marketing systems.In the case of trading, household heads with very limited education face challenges in successfully managing business, as well as deciding what to trade in accordance with consumer taste and preference, especially in the presence of ineffective extension services. As a result, Trades office, Agricultural and Rural Development Offices and different stakeholders must raise awareness about the market's specialty. Continuous education and training in marketing will improve their attitudes.Promoting market integration among intermediaries which are expected to play an important role in improving performance, lowering transaction costs, and reducing the level of oligopolistic market type by creating competitive market.

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