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Full Length Research Paper

Marketing channel and margin analysis: A case study of red pepper marketing at Jabitehinan District in Northwestern Ethiopia

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A study was conducted at Jabitehinan District, Northwestern Ethiopia to identify red pepper marketing channels, analyze marketing margins and investigate the role of different marketing actors. Relevant data were gathered using formal and informal methods of data collection and analyzed with descriptive statistics using SPSS. A total of 39,544qts of pepper was produced in the district and of this; 7,513qts was transacted during 2008/09. Based on the direction of flow of pepper, 10 marketing channels were identified. Markets were found to be inefficient, with wide margins and oligopoly in structure. The highest gross marketing margin was taken by *'baltinas'*, (70.83%) and the minimum being for farmer traders (5.5% of the consumers' price). Similarly, the highest and lowest net marketing margins were 67.37% and 0.5% of the consumers' price which are taken by '*baltinas'* and farmer traders respectively and hence, in terms of the price spread, markets were found to be inefficient. In order to settle price fluctuations and to strengthen the bargaining power of producers, there should be a well stated commodity standard. Government's intervention in the enterprise can help producers and other middlemen involve in pepper trading thereby improving the market competitiveness, structure and efficiency.

Key words: Assemblers, *'Baltinas',* channel, efficiency, margin, wholesalers.

INTRODUCTION

Pepper, by virtue of its versatile use in the modern world, earned a reputation as king of spices. It rules the spice trade both in terms of volume as well as value and contributes about 34% of the total of spice trade by volume (CEDA, 2004; Bosland and Votava, 2000). It is the world's most important vegetable next to tomatoes.

In Ethiopia, pepper is cultivated in many parts of the country. Areas like western Gojjam (Jabitehinan, Burie and Shindi districts), eastern and southern Shewa, western and northwestern Wellega, and the southern Ethiopia (Alaba and the Mareko) are potential producers of pepper in Ethiopia. According to CSA (2008), the estimated production of red peppers at the national level, in the Amhara Region and West Gojjam zone was 122,399.7, 37,039.3 and 12,026.9 tons respectively.

In Ethiopia, pepper is consumed in different forms and it is a component of almost all foodstuffs. It is unlikely to see Ethiopian traditional meals consumed devoid of pepper (Roukens, 2005). However, poor marketing practices, price instabilities and poor handling practices are prevailing that discourage producers. The problems in turn resulted in supply shortage in the area (BoARD, 2009). Hence, improving the market environments should be a priority for improving the supply and satisfying the market demand of pepper. In order to improve the marketing system linked with the markets in the study area, the role of market-actors, market channels and the existing constraints and opportunities along the chain need to be identified. Thus, this study was initiated to investigate the different marketing channels and analyze the marketing margins along the market chains linking the market in the study area to the national and regional red pepper markets.

Objectives of the Study

The overall objective of the study was to investigate the

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marketing performance of red pepper in the study area.
The specific objectives were:
1) Analyzing the different marketing channels
2) Determining the marketing margins
3) Investigation of the role of different marketing actors along the marketing chains

MATERIALS AND METHODS

Description of the Study Area

Jabi Tehinan is one of the 15 woredas of West Gojjam administrative zone. It is found 374 kms Northwest of Addis Ababa and 171.7 kms south west of Bahir Dar, the Regional State capital. The woreda covers a total of 117,020 hectares. Currently, the woreda is divided in to 37 rural Kebele administrations (KAs) and 3 towns. Finote Selam, Mankusa and Jiga are the major towns in the woreda. According to the woreda BoARD (2009) report, human population of the woreda is 270,147 of which 253,348 live in rural areas while the rest 16,799 live in urban areas.
The climate of the woreda is in general 88% Weina Dega and 12% Kola. The average annual rainfall of the woreda is 1250mm. The Western and Northern parts of the woreda receive relatively higher rainfall compared to other parts of the woreda. The woreda has mono-modal rainfall distribution and extends from May to September. Maize, teff and wheat are the major crops in the woreda (BoARD, 2009).
Topographically, the woreda is classified as plain land (65%), terrain (15%), valley (15%) and unclassified land (5%). Altitude of the woreda ranges from 1300 to 2300 masl. The mean annual temperature ranges from 14^{o}C to 32^{o}C.
Three soil types, namely black (15%), red (60%) and brown (25%) are predominant in the woreda. When the soil fertility is considered, it is classified as 27% fertile, 71% of medium fertile and 2% degraded land (BoARD, 2009).

Secondary Data Collection

Data such as production area, output, number of pepper traders and price of pepper were taken from secondary sources. Secondary data sources include the Bureau of Agriculture and Rural Development (BoARD) and Central Statistical Authority (CSA) of Ethiopia.

Primary Data Collection

Primary data were collected from individual households and concerned organizations with an interview schedule. The data were collected from individual interviews. Primary data were gathered from pepper traders, intermediaries of the market chain, concerned government officials and non-government bodies. Informal methods of data gathering (group discussion with key informants and Rapid Market Appraisal) were also employed.
In order to generate primary data, a total of 97 pepper traders were selected using a two stages random sampling method (Mendoza *et al*., 1995).
In the first stage, market centers were selected purposively based on their pepper supply potentials. In the second stage, based on proportion of traders in each market center, the total sample size (97) was proportionately shared among these market centers and respondents were taken at random. Respondents taken from each marketing actors (farmer traders, wholesalers, assemblers, retailers and other marketing actors) is as shown in Table 1.

Methods of Data Collection

Before the beginning of data gathering through interviewing, a three days training was given to 4 enumerators all of which are diploma holders. These enumerators were frequently supervised and the required data from the producers were gathered using a pre-tested interview schedule. For the traders, Rapid market appraisal (RMA) with group discussion, key informant discussions and also direct observation was undertaken in triangulation along the market chain in order to acquire different ideas and diverse view points or stand points of traders from different corners.

Methods of Data Analysis

In this method of data analysis, means, percentages, variances, standard deviations and ratios were used to examine the relevant variables under consideration. The specific indicators quantified were:

Structure Conduct Performance (S-C-P) Model

This model investigates the relationship between market structure, conduct and performance. This model has been used by different market researchers to address their objectives (Tamek and Robinson, 1990). As indicators of the market performance, market concentration ratio and marketing margin analysis have been used along with the description of the conduct of the red pepper market.

Market concentration measure

According to Tamek and Robinson (1990), concentration

ratio refers to the number, and relative size of buyers in the market. The concentration of firms in the market is estimated using the common measure of market concentration ratio. Concentration ratio is one of the commonly used methods to measure of market structure. It is given as:

$$C = \sum_{i=1}^{r} S_i \quad I = 1,2,3,4. \qquad (1)$$

Where S_i = the percentage market share of the i^{th} firm and r = the number of relatively larger firms for which the ratio is going to be calculated.

As noted by Uhl and Kohi (1985), concentration ratio of 50% or more is an indication of a strongly oligopolistic industry, 33-50 % a weak oligopoly and less than that a competitive industry. The problem associated with this index is the arbitrary selection of r, i.e. the number of firms that are taken to compare the ratio.

Marketing margin

Marketing margin is the difference between the price received by producers and paid by consumers (Tamek and Robinson, 1990). According to Cramers and Jensen (1982), marketing margin is the percentage of the final weighted averages selling price taken by each stage of the marketing chain. The total marketing margin is the difference between what the consumer pays and what the producer/farmer receives for his product. In other words it is the difference between retail price and farm price (Mendoza, 1995).

Computing the total gross marketing margin (TGMM) is always related to the final price paid by the end buyer and is expressed as percentage (Mendoza, 1995).

$$TGMM = \left[\frac{\text{Consumer Price - First Seller Price}}{\text{Consumer Price}}\right] \times 100 \qquad (2)$$

Where, TGMM **=** Total gross marketing margin

It is useful to introduce the idea of 'farmer's portion', or 'producer's gross margin' (GMMp) which is the portion of the price paid by the consumer that goes to the producer. The producer's margin is calculated as:

$$GMM_p = \left[\frac{\text{Consumer Price - Marketing Gross Margin}}{\text{Consumer Price}}\right] \times 100 \qquad (3)$$

Where, GMMp **=** the producer's share in consumer price

The net marketing margin (NMM) is the percentage of the final price earned by the intermediaries as their net income after their marketing costs are deducted. Thus the net marketing margin is calculated as:

$$NMM = \left[\frac{\text{Gross Margin - Marketing Costs}}{\text{Consumer Price}}\right] \times 100 \qquad (4)$$

Where, NMM is the net marketing margin.

Amount of pepper supplied to the market

The output data used for this research was the red pepper produced in Jabitehinan district in 2008/09 production season.

RESULTS AND DISCUSSION

Characteristics of Pepper Traders and Channel Analysis

Type and description of pepper traders

Along the marketing chain, there are a number of marketing actors who handle the commodity at different stages in the process of transaction. They together form the link and create the channel beginning from producers until the commodity reaches to the ultimate consumers. These different groups of pepper traders include wholesalers (regional), assemblers (regional and urban), farmer traders (village collectors), processors (pepper millers and '*baltinas*'). Regional wholesalers are those pepper wholesalers who reside in regional towns, not in the capital city and urban wholesalers are those wholesalers who live in and work in the capital city (Addis Ababa). The result indicated that there was a significant difference among traders in terms of the socio-demographic characteristics like sex, age, education level and years of experience at probability levels of 10%, 5% and 1% respectively.

Farmer traders

These are generally seasonal traders who actively participate in times of high supply and shift to other farming businesses when market supply of pepper vanishes. The informal survey result revealed that on average, farmer traders had about 4 years of experience in pepper trading. From the total of farmer traders with whom group discussion was made, 54% of them did not have trade license.

The main objective of farmer traders is to handle large volume of purchased pepper for supplying to wholesalers at better prices (as wholesalers are willing to pay better when they obtain large amount of pepper timely).

Wholesalers

Wholesalers handle large volume of pepper which are bought from producers directly, farmer traders or regional assemblers. They frequently transport their pepper to the terminal market (Addis Ababa) using trucks (Isuzu). With their better knowledge and trading experience, they had close relationships with their agents in regional markets who collects large volume of pepper from different areas of surplus. According to the information obtained, the largest portion of the purchase of regional wholesalers was also

Table 1. Sample size of traders.

KA/Town	Wholeslle s	Assemblers	Retailers	Farmer traders	*Baltinas*	Pepper Millers
Mankusa	2 (2)	3 (4)	6 (14)	11 (16)		
Finote Selam	3 (4)	4 (7)	8 (17)	9 (22)		
Jiga	2 (2)	4 (6)	7 (13)	12 (11)		
Addis Ababa (Merkato)	6 (11)	3 (9)	10 (29)		3 (5)	4 (8)
Total	13(19)	14 (26)	31 (73)	32 (49)	3 (5)	4 (8)

Note: Numbers in the parenthesis are existing population size of traders.
Source: Own survey, 2010.

sold to wholesalers in the terminal market. The informal survey result also indicated that urban wholesalers had a trading experience of about 10 years on average.

Assemblers

These marketing participants buy pepper for storing and selling when demand is better and price is high. Assemblers in regional markets sell their pepper to regional wholesalers when market supply vanishes. They are well experienced in pepper trading (about 5 years of experience on average) and know the best time of selling.

'Baltinas'

Baltinas are processors who sell pepper at relatively high prices after they add value to it. They are very strategic in buying that they try to accommodate and satisfy their demand by purchasing pepper at the peak time of surplus from different potential sources of pepper in the country. They prefer buying the commodity from these regions at the farm gate and transport their purchased amount using their own vehicles.

Price setting strategy of *Baltinas* and pepper mill owners

The informal survey result revealed that *baltinas* shops do not have the power to set the purchase price and they do not want to interfere with the price setting strategy of wholesalers. Rather, relying on the price which is set by wholesalers, they purchase most of their pepper directly from producers aiming at the product's quality and quantity. *Baltinas* are very systematic in identifying the areas of surplus and particular season at which price reaches its minimum.

They determine the selling price by considering all marketing costs and the costs incurred in the process of value addition of the pepper. According to the information obtained, a single value added product *baltinas* requires about 51 types of items (condiments) which costs high per kilogram of output.

As the information obtained from the informal survey revealed, pepper mill owners do not have the power to set the purchase price of pepper as their suppliers are urban wholesalers of who have the power to set the selling price of pepper. But they bargain in terms of quality of the pepper to buy less quality pepper at low prices since their objective is to sell the ground pepper for which quality detection difficult to buyers. About 30% of retailers confirmed that the ground pepper they bought from these millers was the product of low quality processed pepper.

Marketing channels of red pepper

Based on the direction of flow and volume of pepper transacted, ten marketing channels were identified. The channel starts from the producers and ends in the terminal market (except *baltinas*) passing through a number of marketing actors along the chain. According to the district BoARD (2009) report, a total of 39,544 qt of pepper was produced by the year 2008/09. Of this, the amount that was transacted during the year was found to be 7,513qts. Because of the special nature of the commodity, the flow channel was found to be long and complicated. In order to quantify the volume of pepper handled by each marketing actor along the marketing chain, the total purchased amount was multiplied by the share of each marketing actor as obtained from the survey. This work is in line with Kindie (2007; Rasmus,2001).

Following the channels as depicted in Figure 1, the follow

Table 2. Socio-demographic characteristics of pepper traders.

Trader type (Total N=97)	Sex		Age	Experience (Years)
Farmer trader (N=32)	Male (Yes %)	100	34.69 (5.08)	4.12 (4.24)
Regional wholesalers (N=7)	Male (Yes %)	85.71	28.43 (2.76)	9.86 (4.37)
	Female (Yes %)	14.29		
Urban wholesalers (N=6	Male (Yes %)	100	31.33 (4.59)	9.67 (1.63)
	Female (Yes %)	0		
Regional assembler(N=11)	Male (Yes %)	100	32.18 (5.46)	4.82 (1.40)
	Female (Yes %)	0		
Urban assemblers (N=3)	Male (Yes %)	100	26.33 (2.08)	7.00 (1.00)
	Female (Yes %)	0		
Regional retailers (N=21)	Male (Yes %)	85.71	33.95 (6.23)	5.14 (2.13)
	Female (Yes %)	14.29		
Urban retailers (N=10)	Male (Yes %)	70.00	35.00 (9.83)	10.30(2.67)
	Female (Yes %)	30.00		
Baltinas (N=3)	Male (Yes %)	100	47 (4.58)	7.00 (1.00)
	Female (Yes %)	0		
Pepper millers (N=4)	Male (Yes %)	100	44.00 (4.69)	10.5 (1.29)
	Female (Yes %)	0		
	Male (Yes %)	92.78	33.85 (6.55)	6.22 (3.13)
	Female (Yes %)	7.2		
F/ χ^2-Value		14.43*	3.62***	16.49***

Note: *** and * show statistical significance at less than 1 and 10% probability levels
Numbers in the parenthesis are standard deviations N=Sample size; Source: Survey result, 2010

marketing channels were identified:
Channel I. Producer→ Regional wholesaler → Urban wholesaler → Retailer → Consumer
Channel II. Producer → Regional wholesaler → *Baltinas*→ Retailer → Consumers
Channel III. Producer→Farmer trader →Regional wholesaler→Urban wholesaler →Retailer →Consumer
Channel IV. Producer →Regional Assemblers →Regional wholesaler →Urban wholesaler→ Retailer → Consumer
Channel V. Producer → Urban assemblers → Retailer → Consumer
Channel VI. Producer → Urban wholesalers → Millers → Consumer
Channel VII. Producer →Regional wholesaler → Regional retailers → Consumer
Channel VIII. Producer → Regional retailers → Consumers
Channel IX. Producer → Consumer
Channel X. Producer → *Baltinas* → Retailer→ Consumer
Note: "Regional" is used for naming traders who live in the local market centers

Regional wholesalers are those traders who reside in regional towns, not in the capital city and urban wholesalers are wholesalers who live in and work in the capital city (Addis Ababa)

Market Structure and Performance of Red Pepper

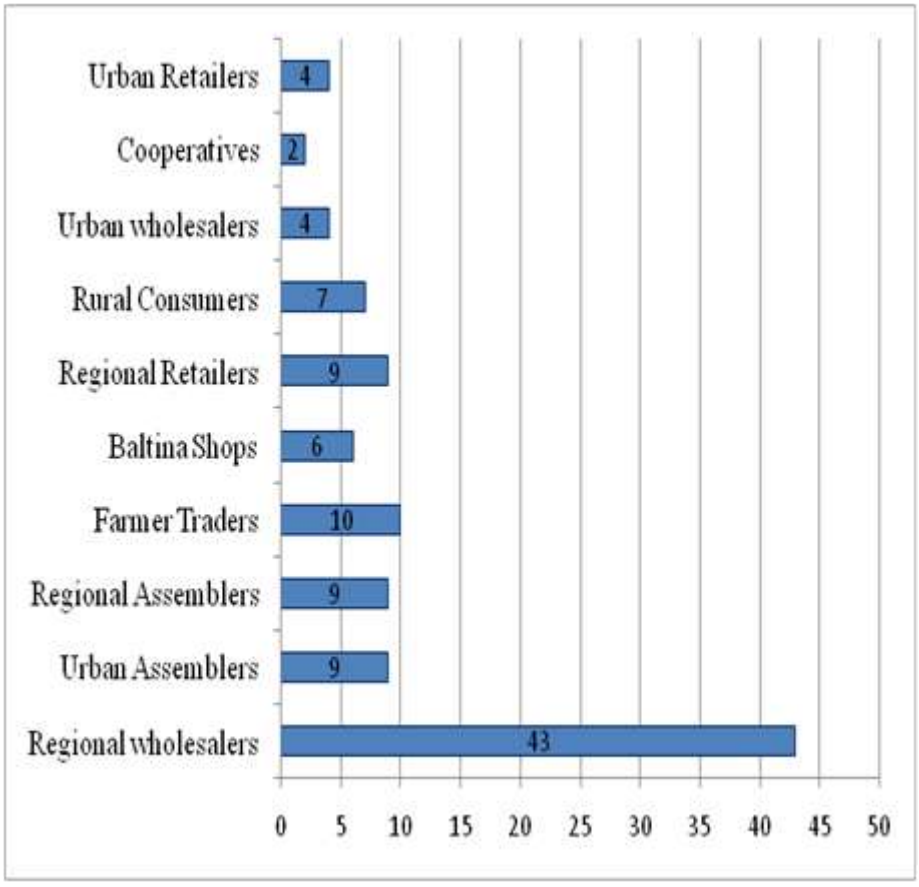
In order to evaluate the market structure of red pepper, the following indicators were used:

Table 3. Education level of traders (%).

Education level	N=32 Farmer traders	N=11 Regional assemb.	N=3 Urban assemb.	N=10 Urban retailers	N=7 Regional wholesales	N=6 Urban wholesalers	N=4 Millers	χ^2
Read and write	50	27.3	0	70	28.6	50	0	
Grade 1-4	9.4	9.1	33.3	10	28.6	16.7	0	
Grade5-8	12.5	0	66.7	0	28.6	0	0	
Grade9-12	28.1	36.4	0	20	14.3	33.3	50	81.90***
Above grade 12	0	9.1	0	0	0	0	50	
Religious school	0	9.1	0	0	0	0	0	

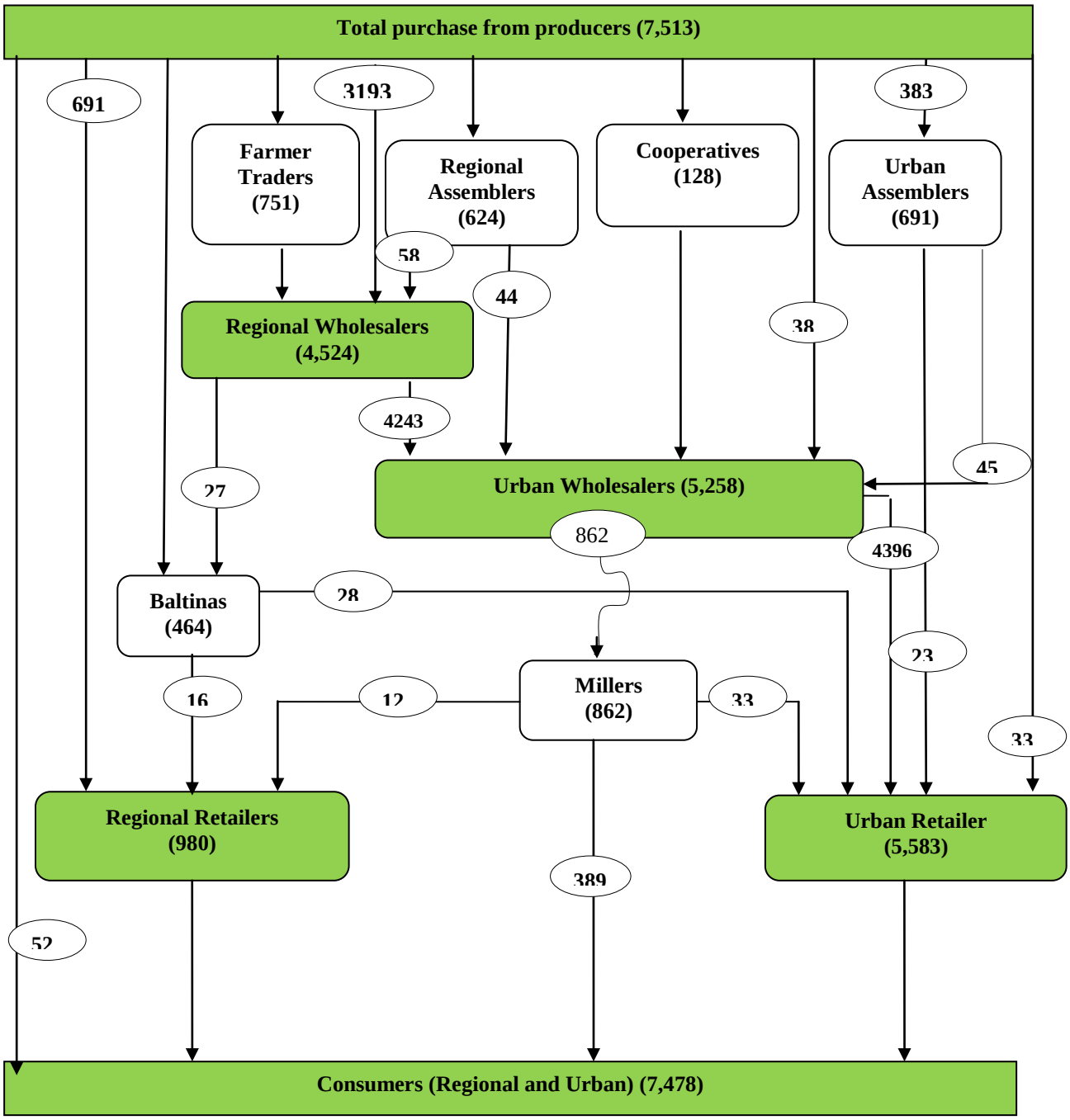
Note: *** shows statistical significance at less than 1% probability level
N=Sample size
Source: Survey result, 2010

Figure 1. Market outlets of farmers (%).



Source: Survey result, 2010

Figure 2. Red pepper marketing channels.



Source: Survey result, 2010

About 76% of farmer traders and 53% of regional wholesalers confirmed that the amount of initial working capital was one of the main barriers to enter pepper marketing. Due to lack of own capital and incapability of traders to take credit from micro finances, many are prohibited from being involved in the pepper trade. The survey result showed that out of the total sample of farmers interviewed, 22.5% asked credit and only 18.33% were able to take credit.

Lack of training

Because of the absence of training on pepper trade in terms of the transaction of the commodity with reason-

Table 4. Concentration ratio of the pepper markets considered.

Markets	Concentration ratio for the four big firms (%)
Finote Selam (Regional wholesalers)	57.82
Addis Ababa (Urban retailers)	41.15
Addis Ababa (Urban wholesalers)	67.41

Source: Own computation, 2010

Table 5. Average marketing costs of traders (Birr/qt).

Cost	Farmer Traders	Regional Wholesale	Urban Wholesale	Urban Retailers	*'Baltinas'*
Sack	8.00	7.00	6.42	7.00	7.00
Loading	6.00	8.00	7.50	7.00	7.00
Unloading	2.00	3.00	4.00	2.00	2.00
Car	8.00	10.00	32.00	13.0	22.00
Cart	15.00	12	-	-	-
Brokerage	15.00	20.00	22.00	5.00	5.00
Carrying	8.00	-	-	-	5.00
Electricity	-	3.00	2.00	-	6.00
Grading	7.00	8.00	8.40	9.00	14.00
Wage	18.00	23.00	20.00	-	12.00
Storage	8.00	14.00	7.00	6.55	10.00
Store loss	18.00	19.00	26.00	4.00	3.00
Guard	11.50	9.50	11.00	5.00	11.00
Telephone	6.00	6.00	4.50	2.00	3.50
Personal expense	15.00	17.50	22.00	13.24	7.0
Total	**145.5**	**160**	**173.47**	**70.79**	**124.5**

Source: Own computation, 2010

able prices and market legalities, many farmers do not have clear understanding about pepper trading although they had sufficient initial capital to start the business. The survey result showed that about 98% of farmer traders, 91% regional wholesalers, 69% of urban wholesalers and 83% of urban retailers have a strong interest to enhance their knowledge of pepper trading from training.

Education level

Education lays a basic ground to involve in pepper trading. The survey result indicated that the education level of traders was by far better than that of producer farmers and it was those individuals who had better education back ground relative to others who become pepper traders. Thus the role of education in changing producers' attitude towards increasing the level of market participation is vital.

Market transparency

Though clear market information is fundamentally important in pepper trading (IPC, 2009), producers are the number one who suffered from the problem of accessing the current price information (especially the terminal market price). However, farmer traders exchange price information with their clients (wholesalers, assemblers and the middlemen) through phones (especially mobile phones) and by oral means of communication. In Jabi Tehinan district, 81.7 % the total interviewed farmers had local market price information but those who had the terminal marker price information were found to be only 22.5%. Producers' and traders generally had strong desire for market information. As the information obtained from the informal survey indicated, about 65% of farmer traders were willing to pay for price information.

Of the total sample of farmers taken, 36.67% got the local market price information by self-assessment, 21.67% by telephone (mobile), 12.5% by asking from traders and 6.7% by radio. Similarly, 8.3% of producers obtained the Addis Ababa market price information using radio, 5.8% by mobile, 5% through brokers, 1.7% by asking traders, 1.7% by television and only 0.8% by self-assessment.

Table 6. Marketing margins along the different marketing channels.

Marketing margins	Marketing channels									
	I	II	III	IV	V	VI	VII	XIII	IX	X
TGMM	71.07	76.67	73.10	71.90	53.93	62.54	35.80	67.51	28.26	70.83
GMM_{ft}			5.5							
GMM_{rws}	12.45	10.73	12.45	10.34						
GMM_{uws}	48.95		58.62	58.62		32.47		13.79		
GMM_{ra}				10.61						
GMM_{ua}					13.89			10.96		
GMM_{rrt}							35.80			
GMM_{urt}	37.93		13.79	12.41	31.54			12.62		
GMM_{bal}		66.67								70.83
GMM_{mill}						50.70				
GMM_{prod}	28.93	23.30	26.90	28.10	46.06	37.45	35.80	32.49	100	26.25
NMM_{ft}			0.52							
NMM_{rws}	6.94	6.28	6.94	11.67						
NMM_{uws}	49.48		52.64	52.64		28.07				
NMM_{ra}				5.16						
NMM_{ua}					12.45					
NMM_{rrt}							26.80	5.85		
NMM_{urt}	35.49		11.35	9.97	28.08					
NMM_{bal}		63.21								67.37
NMM_{mill}						47.23				

Source: Own computation, 2010

Nevertheless, the price information is not equally accessible to all actors. According to the RMA information obtained from farmer traders, about 65% of them on average had no the daily Addis Ababa price information. These traders who did not access the daily market information buy pepper using the price of the previous market day as a reference, which might lead them in crisis if price declines the following day.

Market concentration

Degree of market concentration in Finote Selam and Addis Ababa showed that pepper is handled by few individuals and thus the pepper market is oligopolistic in nature. In the above regional markets, the 2008/9 annual volume of pepper purchased was taken in order to calculate the concentration ratio in the markets considered (Finote Selam, and Addis Ababa).

The concentration ratio had indicated the existence of oligopoly market structure in the three markets considered in different degrees (Table 4).

In Addis Ababa, 4 relatively large wholesalers had a share of about 67.41% indicating a strong oligopoly market structure and a weak oligopoly for regional wholesalers in Finote Selam that took 57.82% of the annual volume of pepper purchased. Of the total volume of purchased pepper, urban retailers in Addis Ababa took 41.15%, which is also an indication of weaker oligopoly in the terminal market than in regional markets.

Marketing performance

Marketing costs and margin analysis

Marketing costs

In the process of pepper trading, each marketing actor incurs costs as in Jema (2008). Table 5 shows the average marketing costs incurred by every actor during transaction. The highest marketing cost was incurred by the urban wholesalers (173.47 birr/qt) followed by regional wholesalers (160birr/qt). This is because the primary packing materials are used by these regional wholesalers and specialized labor for the grading, packing, loading and unloading is relatively expensive in the terminal market han in the regional towns. On the other hand, due to the absence of transport, urban retailers incurred the smallest marketing costs (70.79birr/qt) followed by pepper millers (112.5 birr/qt).

Transport cost was the number one cost for urban wholesales, urban assemblers and regional wholesales,

Table 7. Marketing profit of pepper traders (Birr/qt) for selected channels.

Marketing agents		Marketing Channels					
		I	II	III	IV	V	X
Farmer traders	Purchase price			678.2			
	Marketing cost			145.5			
	Selling price			838.8			
	Marketing profit			15.16			
Regional wholesalers	Purchase price	838.86	838.8	838.8	900		
	Marketing cost	160	160	160	160		
	Selling price	1200	1225	1200	1200		
	Marketing profit	201.14	226.1	201.1	140		
Urban wholesalers	Purchase price	1200		1200	1200		
	Marketing cost	173.47		173.4	173.4		
	Selling price	2635		2900	2900		
	Marketing profit	1261.53		1526.	1526.		
Urban retailers	Purchase price	1800.00		2500.0	2540	1400	
	Marketing cost	70.79		70.79	70.79	70.79	
	Selling price	2900.00		2900.	2900	2045	
	Marketing profit	1029.21		329.2	289.2	574.2	
'*Baltinas*'	Purchase price		1200				1050
	Marketing cost		124.5				124.5
	Selling price		3600.				3600
	Marketing profit		2275.				2425.

Source: Survey result, 2010

regional assemblers, *baltinas* and pepper millers since they had to ship large volume of the purchased pepper from distant markets. The next highest cost incurred by all marketing actors (except urban retailers, pepper mill owners and *baltinas*) was the loss during storage. Due to the addition of large amount of water in the different chains of the transaction process, significant amount of weight loss happens. A similar finding done by Rehima (2006) showed that storage loss was the main marketing cost incurred in the process of trading of the commodity.

The next upcoming highest cost common to all traders was the cost of packing material (plastic sacks). Brokerage costs are also major costs incurred for handling large purchases.

urban wholesalers (48.95) in Channel I. The least (0.52%) was taken by farmer traders (Table 6).

The highest net marketing margin (67.37% and 63.21% of consumers' price) was taken by '*baltinas'* in Channel X and Channel II respectively. The minimum net marketing margin (5.16%) was taken by regional assemblers in Channel IV. These big marketing margins taken by different marketing actors are evidences for the existence of market inefficiencies although high marketing margins can also arise due to high real marketing costs and a very big producer and consumer price difference. This result is in line with Cramer and Jenson (1982; FAO, 2000).

Marketing margins

The marketing margins calculated for each marketing actor show that there is a large difference in the consumers' price spread along the marketing chain. Wider marketing margin indicates high price to consumers and low price to producers and it is an indicator of the existence of imperfect markets (Cramer and Jenson, 1982) though markets may fail due to many reasons.

Total gross marketing margin was maximum (76.67%) in channel II followed by Channel III (73.10%), the minimum was in Channel IX (28.26%). The table also shows that the maximum gross marketing margin was taken by *baltinas,* i.e., 70.83% of the consumers' price in Channel X and 66.67% in Channel II. Pepper millers took the next highest gross margin (50.70) in Channel VI followed by

Traders' profit

The difference between the total income from pepper trading and the costs incurred in the process of pepper trading gives the marketing profit of traders. As depicted

in the Table 7, the highest marketing profit was taken by *'baltinas'* (2,425.5 birr/qt) in channel X followed by (2,275.5 birr) in Channel II. The next marketing actors who earn highest profit next to the '*baltinas*' are pepper mill owners (1,533.04 birr/qt). Because of the value that they add to the commodity (form utility), these two marketing actors were able to take the highest profit in the marketing chain.

Urban wholesalers are the next marketing actors who took the highest profit (1,396birr/qt) and (1261.53 birr/qt) in Channel III/IV and I respectively as they receive the terminal market retail price directly. They are also the one who are strategic in setting relatively higher prices in the terminal markets that help them earn high profit. Urban retailers, who are the final suppliers of urban consumers, took the profit ranking third among the marketing actors which is 1029.21birr/qt in Channel I.

Regional wholesalers took the lowest marketing profit (140birr/qt) in Channel IV. An informal discussion with regional wholesalers confirmed that the unpredictable price decline had been one of the major problems which determined their profit. According to the information obtained, there were cases by which they sold their total purchase even below the purchase price. In addition, in regional markets, wholesalers are highly competed by retailers and farmer traders and they usually pay high brokerage in order to handle large purchase volume. Generally, the profits earned by these different marketing actors are the reflections of high marketing margins.

CONCLUSION AND RECOMMENDATIONS

In order to intensify the emerging commercialization in the district, markets should be efficient and red pepper trading to be diversified, market imperfections should be absent. The result indicated that the commodity produced was in the hands of few traders depicting absences of competition (free markets). The concentration measure showed that the highest share (67.41) was taken by wholesalers in Addis Ababa. Marketing margins calculated for each marketing actors were found to be wide which is the result of low producer prices and relatively high consumer prices (strategically set by terminal market wholesalers). The oligopolistic nature of the commodity market had created convenient situations for the traders to set the price excluding producers and consumers who ultimately become price takers. In addition, price fluctuations, inadequate price information and weak bargaining power of producers were among the major problems.

As an emerging enterprise, Jabi Tehinan district is one of the main supply sources of pepper to the terminal market. The study indicated that of the total of 39,544qts of pepper produced in the year 2008/09, the amount that was transacted along the market channel was 7,513qts. There should be special concern to the production problems like pests, diseases and input usage.

In order to improve the problem of pepper price fluctuation and the bargaining power of producers, implementation of a well-defined standard of the commodity is relevant. Concerned bodies should practice product grading and price differentiation based on the quality of the pepper such as color, pungency and pod size. Hence for a defined standard of the commodity, a common price can be set.

The result revealed that pepper is concentrated in the hands of few traders and the margin share difference among actors is very large. In order to improve the consumer price spread among different marketing actors, the market structure, the market competitiveness and the participation level of others who want to join pepper trading, training about pepper trading should be given to interested bodies. Since pepper trading requires high capital, facilitating credit services to traders (existing and emerging) can attract new traders to involve in the business.

Gross marketing margins were lowest for farmer traders who do not have a better access to day to day price information. This implies that establishing an information net work among the marketing actors can help improve the market efficiency.

In order to fully address the marketing problems and opportunities of red pepper in the study area, additional research should be undertaken and thus the findings of this study should not be used as generalizations to the neighboring pepper growing zones as they have different biophysical and socio-economic set up.

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REFERENCES

BoARD (Bureau of Agriculture and Rural Development) (2009). Farming systems and Production pattern of Jabi Tehinan wereda.

CEDA (Caribbean Export Development Agency) (2004). Caribbean Regional Program for Economic Competitiveness. Discussion Paper, Barbados.

Cramer GL, Jensen W (1982). Agricultural Economics and Agribusiness, 2nd Edition. McGraw Hill Book Company, USA. 222p.

CSA (Central Statistical Authority), (2004, 2005, 2006, 2007,2008). Area and Production of Crops (Private Peasant Holding, Meher Season). Addis Ababa.

FAO (Food and Agriculture Organization) (2000). Addressing marketing and processing constraints that inhibit agri-food exports: A guide for policy analysts and

planners. Agricultural Service Bulletin 160. Rome. Italy. 109p

IPC (International Pepper Community) (2009). Seasonal Price of Pepper. 37th IPC Meeting and Global Pepper Conference held in Belen, Brazil.

Jema H (2008). Economic efficiency and marketing performance of vegetable production in the eastern and central parts of Ethiopia. Doctorial thesis. Swedish University of Agricultural Sciences, Uppsala.

Kindie A (2007). Sesame market chain analysis: The case of Metema district, North Gonder Zone: Amhara National Regional State. MSc thesis presented to the School of Graduate Studies of Haramaya University, Ethiopia. pp.71-76.

Mendoza M, Rosegant M (1995). Pricing conduct of spatially differentiated markets. Prices, Products, and People. International Potato Center, Lima, Peru. Pp.343-356.

Rasmus H (2001). Agricultural Supply Response and Poverty in Mozambique, Institute of Economics, University of Copenhagen. Conference paper on “Growth and Poverty” at Wider 25-26 May 2001.

Rehima M (2006). Analysis of Red pepper marketing: the case of Alaba and Silte in SNNPRS. MSc thesis presented to the school of graduate studies of Haramaya University, Ethiopia.

Roukens O (2005). Export Potential of Ethiopian Oleoresins. Ethiopian Export Promotion Department, Ethiopia. Pp.7-14.

Tomek WG, Robinson KL (1990). Agricultural Product Prices. Third ed., Cornell University Press, New York. pp.107-8(360)

Uhl JN, Kohi RL (1985). Marketing of Agricultural Product, 5th Edition, Collier Macmillan, USA. 624p.