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Marketing of orange: a value chain perspective in the selected areas of Sylhet District in Bangladesh

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Abstract

Orange is one of the most import fruit crops that generate additional cash income for market actors. The study was investigated the marketing system of orange , value addition, roles and functions of value chain actors with the help of primary data collected from both farmers (forty) through simple random sampling and value chain actors (thirty) through purposive sampling by using structured questionnaire and face to face interview technique. The gross return and net return of farmers were estimated Tk. 2, 70,000 and Tk. 22084.77 per hectare respectively. Per quintal value addition of orange of *bepari, aratdar*, wholesaler and retailer were estimated at Tk. 800, Tk. 340, Tk. 700 and Tk. 1000 respectively. The net marketing margin per quintal of orange of *bepari, aratdar*, wholesaler and retailer were estimated at Tk. 293.59, Tk. 107.32, Tk. 356.46 and Tk. 700.8 respectively. Among the different actors, retailer incurred highest (in percentage) value addition and net marketing margin. On the other hand, *aratdar* incurred lowest marketing cost and marketing margin and *bepari* incurred highest (in percentage) marketing cost but adding second highest value in compare to another.

Key words: Marketing system, value addition, orange, Sylhet district.

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Introduction

Agriculture is the backbone of the rural economy in Bangladesh. Rural economy is sharpen and regulated by the rural masses and its development often relies on various economic activities they perform. Horticultural farming is yet one of the major source of generating adequate income. There are various kinds of horticultural crops like fruits, vegetables, spices, nuts, tuber crops and medicinal & aromatic plants etc.

The land and climate condition of Bangladesh with abundant water and humid temperature is ideally congenial to the cultivation of Citrus fruits like orange. The total area under orange cultivation in Bangladesh is about 2427.13 acres and production 1, 36,756 tons where only Sylhet regions bear's area under cultivation is 84.21 acres and production is 1005 tons (BBS, 2012). As of 2014-15, sweet oranges produced in Bangladesh accounted for 40 thousand tons of total fruits production (BBS, 2014). So due to its high production in the district, it is necessary to tap the potential of orange so that farmers can earn a high return and cash from their high produce. It is important to have an efficient marketing system, so that producer gets appropriate returns for their produce and consumers get them at reasonable price.

The production of orange being seasonal and localized to favoured agro-climatic conditions coupled with the

perishability of the produce pose several problems on marketing front. Seasonal gluts, distress sale and volatile behaviour of price are, therefore, common trend in all assembling markets during normal production season. Then marketing and transportation of fruit crops are other hurdles in the way of fruit growers of rural areas who are also exploited by middlemen resulting in the low share of farmer in the consumer's taka. Further, the continued adoption of unorganized marketing practices also lead to high marketing costs, margins and price spread which all combine together to snatch away the economic attraction which the crop holds and the keenness in the producer farmers to invest in the improved technology and better inputs. Besides these factors the development in rural areas is circumscribed by the specificities namely inaccessibility, marginality and fatality which contribute in physical isolation distance and high transportation cost.

The overall objective of the study is to analyze and appraise the value addition of orange in various marketing steps. The specific objectives of the study are to identify the actors and their functions in the value chain of orange, estimate the cost and return of each value addition stage and identify the value added to the product and estimate the percentage share of added value in terms of profit and cost for each market actors

Methodology

Selection of the sample and sampling technique

Sylhet district is one of the high yielding and widely orange producing district of the country. The availability of orange growers and traders in Sylhet district were the main criteria for selecting as the study area for the present study. In the present study, the sample includes growers and different market participants such as *bepari, aratdar,* wholesaler, and retailer. A list of orange growers of the selected areas was prepared through a preliminary survey. The sample size for orange grower was fixed at forty. Out of 40 selected growers, 20 were from Sythet Sadar and 20 were from Jaintiapur upazila in Sylhet district through simple random sampling technique and thirty value chain actors such as 7 Beparies, 7 Aratdars, 8 wholesalers and 8 retailers were selected through purposive sampling technique. Data were collected during the month of October-November, 2015 through primary sources though these month were the harvesting season of orange. Secondary data also collected from different published and unpublished sources.

Analytical techniques

Descriptive statistics were used for reaching the objectives of the study. Value chain mapping, and simple statistical measures like sum, percentage, average and ratios were used to explain the findings of the research. For estimating gross return, net return, gross marketing margin, net marketing margin and return on operating capital the following formula were used:

***Value addition at producer's level*:** Value addition (profit) at producer's level was derived at by deducting all costs (variable and fixed costs) from gross return. The following equation was used to assess the value addition/net profit of orange at producers' level:

$$\pi = P_F Q_F - (TVC + TFC)$$

Where, π = Producer's profit (Tk. /ha)

P_F = Price of produce (Tk. /quintal)

Q_F = Quantity of produce (quintal/ha)

TVC = Total variable cost (Tk./ ha)

TFC = Total fixed cost (Tk. /ha)

***Value addition at traders' level*:** Value addition at traders' level was calculated by deducting all costs (variable and fixed costs) from gross return. The following formula was used for calculating value addition at traders' level:

GMM = Selling price-Purchase price

Profit (π) = Net marketing margin (NMM) = GMM-MC

Where, NMM= Traders' profit (Tk. /quintal)

GMM = Gross marketing margin (Tk. /quintal)
MC = Marketing cost (Tk. /quintal)
Value Addition (%) = (Sales price- Purchase price)/Purchase price × 100

Marketing Efficiency

To evaluate the marketing efficiency of different channels of different components following methods were used (Acharya and Agarwal, 1999).

i. **Conventional method:** Efficiency of any activity or process may be defined as the ratio of output to input. It is worked out as:

$$E = O/I \times 100$$

Where, O stands for output i.e. value added measures in terms of difference in the consumers' price and price received by the farmer (Taka per unit),
I for input (total marketing costs incurred)
E is the index of marketing efficiency
A higher value of E denotes higher level of efficiency and vice versa.

ii. Acharya's method: Acharya has modified the formula of estimating marketing efficiency, which is worked out as:

$$\text{ME}\ (\%) = \frac{\text{Pp}}{(\text{TMC} + \text{TMM})} \times 100$$

Where, Pp = Producer's price
TMC = Total marketing cost
TMM = Total net marketing margin
ME = Marketing efficiency

Result and Discussion

Actors involved in value chain

Value addition is mainly concerned with the changes of utilities. When product passes through distribution channels, it creates place, time, and possession utilities. For this reason this deals with identifying the actors involved in value chain and their functions of orange marketing.

It is clear that along with the farmer/producer, a number of actors participated in the marketing of orange from the production point to the consumer point. The main value chains actors involved in the orange marketing, their roles and inter relationships are discussed as follows:

The value chain actors perform the basic functions of the value chain. Typical actors of the orange value chain in the study include farmers and different actors such as *Bepari, Aratdar,* wholesaler and retailer. They are in common become owners of the product at certain stage in value chain of orange marketing.

From Figure 1, it is found that the orange in Sylhet district is moved through the following chains:
Channel I: Farmer→ Consumer
Channel II: Farmer→ *Bepari* → Consumer
Channel III: Farmer→ *Bepari*→Retailer→ Consumer
Channel IV: Farmer→ *Bepari*→ *Aratdar* → Wholesaler→ Consumer
Channel V**:** Farmer →Retailer→ Consumer

Channel VI:Farmer→ *Bepari*→ *Aratdar* → Wholesaler → Retailer→ Consumer

The analysis reveals that marketing of orange in Sylhet district is moved from the hands of producers to the hands of the consumers through six separate channels. In channel I, oranges are sold at primary market or at farmgate. This happens particularly in case of small growers who have small lots and prefer to sell at the earliest at orchard site in order and orange farmers sold larger portion of their orange i.e. 80.71 % to the *Bepari* followed by 15 and 4.29 % to the retailers and consumers. In channel II, here the producers sold their orange directly to *Bepari* and *Bepari* sold their orange to the *Aratdar* (70%), retailer (8.57%) and consumer (8%) in consuming market. In the study area 79.75 % of orange was distributed through this chain (Channel IV). In channel V, this chain contains three actors levels i.e. farmer, retailer and consumer. In the study area 20.25 %of orange were distributed through this channel. Channel VI is the largest chain of distributing orange. The role of *Bepari* in this marketing channel is to arrange transport and ensure that orange reaches the particular market and to *Aratdar* or commission agent etc, where the grower wants to send his produce. Here

wholesalers buys orange from *Aratdar* and sells to retailer who in turn sells to ultimate consumers (Chain VI). They all took a portion of margins at each stage of value addition activities.

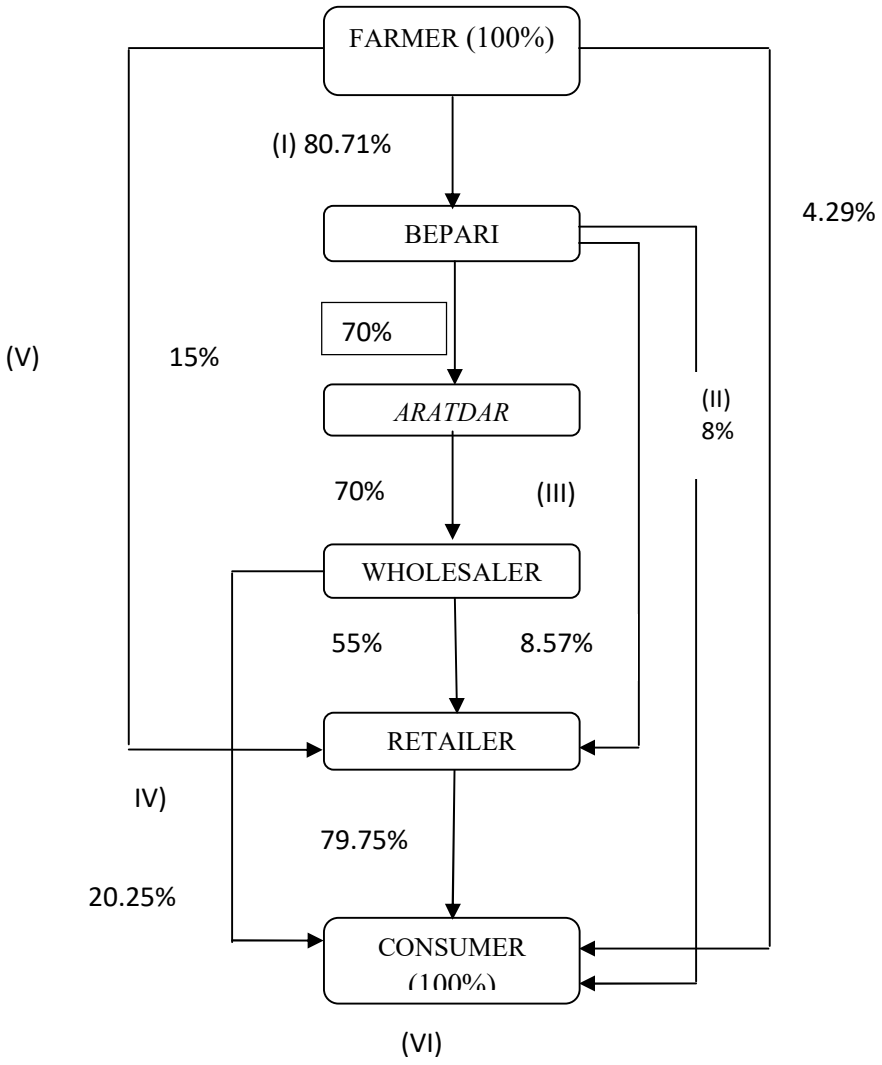

Figure 1. Distribution channels of orange ofvalue chain actors in Sylhet district

Producer

The producers were the farmers who after harvesting the produce performed the role of a seller in marketing orange. Orange producers were the main actor and played an important role in the orange value chain. They produced orange independently and sold them to the local traders or urban traders. In the study area the producers used to sell orange to the market actors such as *Bepari, Aratdar,* wholesaler and retailer either at the markets.

Bepari

The *Bepari* were also non-licensed traders. The *Bepari* were relatively medium traders and they handled relatively larger volume of orange than that done by other traders. They were independently organized. They had no fixed business premises. Most of the

Bepari had no permanent shop staff. Crate sale or purchase was very common practice for *Bepari*. There is strong competition among the *Bepari* at entry to this type of business is not rather easy. As a result, *Bepari* could not make high profit in their business. The *Bepari* were professional traders who purchased orange from the farmers, *Aratder* and wholesaler at the local market sold it to district wholesaler and local wholesaler. They themselves financed their business and accepted loan in rare case.

Aratdar

The *Aratdar* were licensed traders. The *Aratdar* were relatively big traders and then handled relatively larger volume of orange than that done by the other traders. They had fixed business premises. Most of the *Aratdar* were independently organized and self-financed.

They employed both labors and other staff on daily wage and salary basis for performing various functions. They had some permanent and temporary staffs. The *Aratdar* only sold the oranges to distance market (Dhaka, Chittagong etc.) through wholesaler in different markets those they received from *Bepari* for this why they used to get a commission. The *Aratdar* sometimes used to borrow money from different bank, other financial institute and other non- institution (friends and relatives and other traders) for a short period in rare cases.

Wholesaler

The wholesalers were also non-licensed traders. They were relatively medium traders like *Bepari* and they handled relatively larger volume of orange than that done by other traders. They were independently organized. They had no fixed business premises. Most of the wholesaler had no permanent shop staff. Mainly the wholesaler sold oranges to the retailer at a relative volume.

Retailer

The retailers were last link in the marketing of orange. They were the specialized sellers who were directly connected with the consumers. Sometimes, they purchased orange from the wholesaler at the district level. They bought the orange in small volume on the basis of open bargaining and sometimes on the basis of pre-fixed market price and sold directly to the ultimate consumers at the retail shops. The retailers were the professional traders who used to sell their purchased orange to consumers directly. Most of the retailers were independently organized having permanent shops usually in the open market place and labor for performing retailing activities. There were some retailers who had no permanent shop usually use open market place for their sale. Most of the retailers had been doing business for more than five years. In spite of being self-financed they borrowed money from friends, relatives and other non-institutional sources at the time of need.

Value chain actors' functions of orange

Marketing system may be thought of as the connecting link between specialized producers and consumers (Kohls, 2005). An efficient marketing system is essential for earning fair profit for the fish farmers and traders. Marketing functions may be defined as major specialized activities performed in accomplishing the marketing process of concentration, equalization and dispersion (Kohls, 2005). The functions that performed by the value chain actors are described in this chapter for achieving the research objectives. The marketing functions are buying and selling, grading, storage, transportation, financing, risk bearing and market information which are discussed in details with respect to the value chain actors roles and responsibilities and their obligation to perform these functions.

Buying and selling

The primary objectives of buying and selling are the negotiation in favorable terms and exchange. Both buyers and sellers constantly observe the fluctuation of prices of goods and commodities. Buying generally includes the selection of goods, the determination of quality and quantity and the selection of sources of supply. The activities involved in the transfer of goods are completed through buying and selling functions.

Aratdar do the functions of negotiation between buyers and sellers of orange and help them at their own business premises on receipt of commission. They do not take the ownership of the orange.

Table 1. Percentage of orange transacted by value chain actors

Value chain actors	Purchase from (%)				Sold to (%)				
	Farmers	Farmers via *Aratdar*	Whole-salers	Retailers	Whol-salers	Wholesalers via *Aratdar*	Retailers	Retailers via *Aratdar*	Consumers
Bepari	80.71	19.29	-	-	76.43	15	8.57	-	-
Aratdar	*Aratdar* negotiate between buyers and sellers of orange and help them at their own business premises on receipt of *Aratdari* commission.								
Whole-saler	17	83	-	-	-	-	-	79.75	20.25
Retailer	52.75	47.25	-	-	-	-	-	-	100
Consumer	-	-	-	100	-	-	-	-	-

Source: Field survey (2015)

The study shows that mainly *Bepari* sell 76.43% of their orange to wholesaler, 15% wholesaler through *Aratdar*, and remaining 8.57% to retailer directly. Wholesaler sells 79.75% of their oranges to retailer via *Aratdar* and 20.25 % to consumers directly. Retailers sell the entire orange to ultimate consumers. *Bepari* of oranges purchases 80.71% from farmers and 19.29% directly from farmers through *Aratdar*. Consumer purchases 100% of oranges from the retailers in the study area (Table 1).

Grading

Grading is the basic function of sales transactions and is defined as the classification of products according to some standards or measures (Kohls and Uhl, 2005; p. 314). Grading is the sorting of produce into different market quality which facilitates exchange by simplifying buying and selling as it makes the sale by showing sample and description possible. It also simplifies the concentration process and makes easier and less costly the movement of goods through the marketing channel. Grading facilitates sale since different sizes of orange have different prices. In this study, all the actors grading their oranges on the basis of size.

Storage

The storage facilities help buyers and sellers to reduce the wide fluctuation of prices between peak and lean seasons. The storage function is primarily concerned with making goods available at the desired time and enables traders to receive better prices for their products. Because of high perish ability; orange requires specialized storage facilities matching the seasonal demand. Orange is transported from one place to another using basket, crate and wooden box.

Transportation

Transportation is a basic function of making goods available at proper place and it creates place utility. Perishable goods must be moved as early as possible from the producing center to consumer.

Table 2. Modes of transportation used by value chain actors for movement of orange

Value chain actors	Modes of transportation (%)				
	Rickshaw	Van	Truck	Pickup	Bus
Farmer	75	25	-	-	-
Wholesaler	-	-	55	45	-
Retailer	85	-	-	-	15

Source: Field Survey (2015)

That is why transportation is essential for highly perishable commodities like orange. Adequate and efficient transportation is a cornerstone for the modern marketing system (Kohls and Uhl, 2005, p.319). In the study areas, the orange farmers and intermediaries use various modes of transports such as head load, rickshaw, van, truck, bus, pickup, head load etc. to transfer product from the producing areas to the consumption center. Table 2 shows different modes of transport used by the different actors to transport orange from one place to another.

Market Information

Market information is a facilitative function required for efficiently operating marketing system. In the study area, visiting the markets and use of telephone/mobile phones are the most common sources of collecting market information for all value chain actors. Table 3 shows the sources of market information flows from one actor to another. In this study, farmers collect 80% information from the market. While *Bepari* collects 70%, wholesaler 85% and retailer collects 75%information from the market. *Aratdar* collects maximum information through telephone/ mobile comparative to other actors those are involved in orange marketing (Table 3).

Packaging

Packaging is essential for proper transportation of orange. Packaging may be defined as the general group of activities in product planning which involves designing and producing the container or wrapper for a product. 'Basket' made of bamboo; plastic and wooden are used by farmers, *Bepari*, wholesaler and retailers of orange. Wooden baskets are usually used when orange is transported in production places to distance places like Dhaka, Chittagong, Mymensingh etc. Table shows the packing system in the study area. Each box contains 10-12 kg of orange (Table 4).

Table 3. Sources of market information of orange farmers and different actors

Sources of information	Market participants (%)				
	Farmer	*Bepari*	*Aratdar*	Wholesaler	Retailer
From the market	80	70	65	85	75
Telephone/mobile	20	30	35	15	25

Source: Field survey (2015)

Pricing

In the study areas, all intermediaries are involved in buying and selling of orange. Farmer, wholesalers and retailers practice open bargaining, auction and going market prices method for fixing price of their products in varying degree. Price depends on quality, size, weight, market structure, supply and demand, and taste. Table 5 shows that around 70 % of the farmers sell their orange through market price. Ninety percent of the *Aratdar* and 65 % of the retailer sold their orange

through market price and *Bepari* 100 % of their orange sold through auction (Table 5).

Value Addition of orange by producer/farmer

Value Addition is mainly interpreted as the difference between the total expenses involved in making or buying of a commodity and the total revenue earned from its sales. Value Addition activities are mainly concerned with the changes of utilities. To determine the addition on orange produced by the producer, the cost and return was estimated in terms of per hectare and per quintal. In orange cultivation, cost of inputs like human labor, land preparation cost, seed or tree planting cost, fertilizer or manure cost, insecticide and pesticide cost, and also fixed cost like land use cost were required. Marketing cost also estimated at different stages of value chain. The production and marketing costs per quintal are shown in the following Table 6, Table 7, and Table 8. In order to estimate gross cost per quintal all the resource uses in orange cultivation have been recaptured together. In the study area, the total costs of orange were estimated at Tk. 234686.13per hectare. In the study area per hectare summation of the costs of variable inputs made total variable costs, which was Tk. 135891.55 of orange and fixed cost of orange cultivation, includes land use cost and interest on operating capital. Summation of the costs of fixed inputs made total fixed costs, which was Tk. 98794.58 of orange. Total marketing cost of farmers, was worked out to be Tk.293.98 per quintal. Average sales price of orange received by farmers were Tk.6000 per quintal.

Table 4. Packaging system of orange marketing

Packaging practices	Using materials	Capacity	Used by
Basket	Bamboo, Plastic and Wooden	10-12kg	Farmer, *Bepari, Aratdar*, Wholesaler and Retailer

Source: Field survey (2015)

Table 5. Pricing practices orange by value chain actors

Pricing methods	Value chain actors (%)				
	Farmer	*Bepari*	*Aratdar*	Wholesaler	Retailer
Open bargaining	20	-	-	70	25
Auction	-	100	-	-	10
Market prices	70	-	90	30	65
Prefixed prices	10	-	10	-	-

Source: Field survey (2015)

The average yield of orange per hectare was estimated at 45 quintal and the average gross return from orange production was calculated by multiplying the total amounts of produce by its prevailing market price which was Tk. 6000 per quintal. The total gross return was estimated Tk. 2, 70,000 per hectare (Table 9). Gross margin is the gross return over variable cost. Gross margin was obtained by deducting total variable cost from gross return. In the present study, gross margin was estimated Tk. 134108.45 per hectare (Table 9). Net return is very useful tool to analyze or compute performance of enterprises. Per hectare net return is calculated by subtracting gross cost from

gross return. In this study, net return was calculated at Tk. 22084.77 per hectare (Table 9).

Value Addition and marketing costs of orange by other value chain actors

Marketing cost of orange include various expenses incurred by different functionaries for physical movement of orange through the marketing channel. There are different types of expenses such as loading and unloading, transportation, basket, personal expenses, wastage, telephone charge, *aratdar's* commission, market toll, rent. in this section, marketing cost incurred during buying and selling by *bepari, aratdar*, wholesaler and retailer are discussed.

Table 6. Average production cost of orange per hectare

Indicattors	Cost Items	Amount	Price per unit	Cost (Tk./ha/year.)
Variable costs	Land Preparation	30(no.)	414.98 (Tk.)	12449.4
	Seed/Tree planting	550 (pieces)	120 (Tk.)	66000
	Fertilizers			
	I. TSP	348.48 kg	22Tk./kg	7666.56
	II. MOP	336.36 kg	15Tk./kg	5045.4
	III. CaO	348.48 kg	15Tk./kg	7666.56
	Cow dung and manure	4242.42 kg	1.5Tk./kg	6363.63
	Pesticide and Insecticide			10200
	Irrigation			10000
	Human labor	30(no.)	350(Tk.)	10500
	Total			135891.55
Fixed costs	Land use cost			92000
	Interest on operating capital			6794.58
	Total			98794.58
Total production cost				234686.13

Source: Field Survey (2015)

Table 7. Average production cost of orange per hectare and per quintal

Items	Tk. per hectare	Tk. per quintal
Total production cost	234686.13	5215.25
Variable cost	135891.55	3019.81
Fixed costs	98794.58	2195.44
Sales price	-	6000

Source: Field Survey (2015)

The total cost of marketing of orange included all costs incurred by different value chain actors operated between the producers and the consumers. It appears from Table 10 that the total cost of marketing was Tk.1381.83 per quintal of orange for all actors. The

highest amount of marketing cost was borne by *Bepari* followed by retailers and wholesalers. Among the different actors, retailer incurred highest (in percentage) value addition and net marketing margin. On the other hand, *aratdar* incurred lowest marketing cost and marketing margin and *bepari* incurred highest (in percentage) marketing cost but adding second highest value in compare to another.

Table 8. Average marketing cost of orange per hectare and per quintal

	Cost Items	Cost (Tk./ha)	Cost (Tk./quintal)
Marketing costs	Loading and unloading	446.4	9.92
	Transportation	3903.75	86.75
	Grading	1230.3	27.34
	Sorting	1316.25	29.25
	Basket	873	19.4
	Personal expenses	2534.4	56.32
	Others	1732.5	38.5
	Wastage	652.5	14.5
	Market toll	540	12.00
Total		13229.1	293.98

Source: Field Survey (2015)

Table 9. Gross margin and net return of orange farmer

Particulars	Tk. per hectare	Tk. per quintal
A. Gross return	270000	6000
B. Variable cost	135891.55	3019.81
C. Total cost (Total production cost + Total marketing cost)	247915.23	5509.28
D. Gross margin (A-B)	134108.45	2980.19
E. Net return (A-C)	22084.77	490.77

Source: Field Survey (2015)

Value Addition of Orange

Generally this section is concerned with the assessment of value addition of oranges by value chain actors such as farmers/producers, *Aratdar*, wholesalers and retailers. Value addition is mainly interpreted as the difference between total expenses involved in making to buy of a product and total revenue accruing from its sales. Value addition activities are mainly concerned with the change of utilities. For these reasons this section goes through the cost and return at different level that are incurred and obtained by farmers/producers, *Bepari, Aratdar*, wholesalers and retailers and finally estimation of value addition at different levels.

The percentages of total value addition cost and total net profit by different actors for orange are shown in Table 12. The major cost is borne by wholesalers (30.22 % of total cost) and major net profit is earned by retailers (48.06 % of total net profit) (Table 12).

Table 10. Total marketing cost incurred of different actors

(Tk. /quintal)

Cost items	Categories of different actors				All actors
	Bepari	*Aratdar*	Wholesaler	Retailer	
Loading and unloading	7.67	0.00	7	0.00	3.67
Transportation	68.75	0.00	80.5	56.43	51.42
Basket	18.43	0.00	17.14	14.71	12.57
Grading	0.00	0.00	11.4	15.33	6.68
Wage and salaries	0.00	65.14	0.00	0.00	20.54
Shop rent	0.00	115.14	154.93	143.75	114.46
Electricity bill	0.00	11.13	31.5	33.38	19.08
Personal expenses	14.57	11.98	25.5	19.5	17.89
Wastage	10.2	0.00	9	9.6	7.2
Telephone charge	8.79	7.29	6.57	6.5	7.29
Aratder's commission	340	0.00	0.00	0.00	85
Market toll	38	22	0.00	0.00	15
Total	506.41	232.68	343.54	299.2	360.8

Source: Field Survey (2015)

Table 11. Value addition, marketing cost and net marketing margin of different value chain actors of orange in Tk. per quintal (Tk. per quintal)

Actors	Purchase Price	Sales Price	Gross marketing margin or Value addition	Marketing cost	Net marketing margin
Bepari	6000	6800	800	506.41	293.59
Aratdar	-	-	340	232.68	107.32
Wholesaler	6800	7500	700	343.54	356.46
Retailer	7500	8500	1000	299.2	700.8

Table 12. Percentage distribution of value addition cost and profit by different value chain actors of orange

Actors	Percentage of total value addition cost	Percentage of total profit
Farmer	17.54	-
Bepari	30.22	20.13
Aratdar	13.87	7.36
Wholesaler	20.49	24.45
Retailer	17.85	48.06

Note: Percentages of total value addition cost/net profit = $\frac{\text{Marketingcost/ Net marketingmargin}}{\text{Totalmarektingcost/ Totalnet marektingmargin}} \times 100$

Conclusion

The orange is one of the common and important citrus fruit because of its high nutritional values. Value chain analysis of orange plays a decisive role in determining the level of value addition and net marketing margin. Large numbers of people are involved in production and marketing of orange and different number of actors like *Bepari, Aratdar*, wholesaler and retailer are involved in the value chain of orange marketing system. They played an important role in moving orange to the consumers but at cost sharper the present study investigate different value chain in which the actors acted as intermediaries with their costs and value addition. The production and marketing of orange in Sylhet is highly remunerative. The investment in orange cultivation is profitable and net return from orange cultivation can further be increased if creating efficient marketing environment. This is mainly attributed to close proxy, good communication facilities especially development of cell phone technology and good infrastructure availabilities among the market centers in Bangladesh. In this study the profit of retailer was higher than that of other intermediaries. To make the business more profitable, efficient marketing system should be developed by reducing marketing cost and increasing marketing services**.**

The analysis reveals that marketing of orange in Sylhet district is moved from the hands of producers to the hands of the consumers through six separate channels. In channel I, oranges are sold at primary market or at farmgate. This happens particularly in case of small growers who have small lots and prefer to sell at the earliest at orchard site in order and orange farmers sold larger portion of their orange i.e. 80.71 % to the *Bepari* followed by 15 and 4.29 % to the retailers and consumers.

The study recommends for appropriate policy intervention for financing producers so that they can manage to tackle the vicious chain of non-institutional money lenders and can secure more profit. On the basis of the findings a number of recommendations have been put forward. The operation of present value chain analysis of orange in Bangladesh warrants a restructuring. It should be carried on in accordance with the modern marketing concepts in order to be commercially profitable to the growers, besides being useful to the consumers. This calls for immediate plan of action for putting the value chain analysis on sound footing.

References

Acharya SS, Agarwal NL (2004). *Agricultural Marketing in India*.New Delhi, Oxford and IBN Publishing Co. Pvt.Ltd.

Bangladesh Bureau of Statistics, (2011).Statistical Year Book of Bangladesh, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka.

Bangladesh Bureau of Statistics, (2012).Statistical Year Book of Bangladesh, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka.

Bangladesh Bureau of Statistics, (2014).Statistical Year Book of Bangladesh, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka.

Khols RL, JN Uhl (2005). *Marketing of Agricultural Products*, 9th ed. Macmillan, New York.

http:// www. orange (fruit) - wikipedia, the free encyclopedia./E:/orange/html.

http://en.wikipedia.org/wiki/value_chain_management