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Impact of emerging marketing channels in agricultural marketing: Benefit to producer-seller and marketing costs and margins of agricultural commodities – A study in West Bengal

Executive Summary

D. Sarkar
R. C. Mondal

Agro-Economic Research Centre
Visva-Bharati
Santiniketan
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Introduction

Ministry of Agriculture Government of India amended the APMC Act in 2003 and advised the state to implement the same. The amendment helps complete transformation of agricultural marketing with a view to making the market growth oriented. The amended Act allowed the concerned authorities to set up new marketing establishment as well as contract farming so that the growers of agricultural, horticultural and other commodities could get access to efficient market. Thus it is obvious that due chance in the market system, role of new or emerging channel of marketing is important. It is therefore, the present study, "Impact of Emerging Marketing Channels in Agricultural Marketing – Benefit to Producer-seller and marketing Cost and Margin of Major Agricultural Commodities" is assigned by the Ministry of Agriculture Government of India. The study is undertaken by the Agro-Economic Research Centre, Visva-Bharati for the state of West Bengal to assess the impact of emerging channel in the trading of agricultural commodities. To assess the impact a comprehensive analysis has been taken between existing and emerging marketing channel of agricultural commodities, the study involves two crops – Arum (A vegetable crop) and Mustard (the oil seeds) for Emerging Marketing Channel (EMC) and Traditional Marketing Channel (TMC) respectively for in-depth study.

Objectives

The specific objectives of the study are:

(i) to explore the farmer's share in the consumer rupee in emerging marketing models vis-a-vis the traditional marketing channels;

(ii) to work out the degree of market efficiency and incidence of post-harvest losses in emerging marketing channels vis-a-vis traditional marketing channels;

(iii) to find out the market practices and services provided by different agencies in the emerging marketing channels vis-a-vis traditional marketing channels;

(iv) to examine the constraints faced by the farmers and different market functionaries in the emerging marketing channels vis-a-vis traditional marketing channels;

(v) to suggest policies based on the findings of the study.

Data Base and Methodology

The study has been conducted in West Bengal based on both primary and secondary data. The reference year of the study is 2009-10. The study has been conducted in Murshidabad district. For primary survey two crops i.e. arum for emerging channels and mustard for regular channels have been selected for the enquiry and a comparison has been done in between the regular and emerging marketing channels. The detailed methodology of the study is as follows.

Table 1: Distribution sample farmers and other market intermediaries

	EMC	TMC
Farmers (Nos.)	100	100
Trader/Commission Agent (Nos.)	15	15
Whole-seller (Nos.)	5	5
Retailer (Nos.)	15	-
Consumer (Nos.)	15	-

Primary data has been collected from the farmers and market intermediaries. The farmers were stratified on the basis of their land holding i.e. marginal (up to 1.00 hectare), small (>1.00 – 2.00 hectare) and medium (> 2.00 to 4.00 hectare). Farmers having land more than 4.00 hectares was not available. The proportion of households from the give size group was selected on basis of incidence in the total population. Total number of households selected for in depth survey was 200 – 100 each from the Traditional Marketing Channel (TMC) and Emerging Marketing Channel (EMC). The numbers of other market intermediaries selected for in depth survey were given in Table –1.1.

Apart from that with a view to gather official information of the Agricultural produce Market Committee (APMC) opinion of the members of the APMC was collected from a focus group discussion.

A simple tabular analysis is taken up for to analyse the impact of traditional vis-a-vis emerging marketing channel for the crops, Arum and Mustard. The market efficiency of both the crops has been calculated by using Acharys's method – the modified method of market efficiency.

The formula of the same is:

MME = FP/(MC + MM)
Where, FP = Price Received by the Farmer
MC = Marketing Cost and
MM = Marketing Margin

Limitations of the Study

Though considerable precautions and thoughts have been exercised to make the study precise, objective and reliable, yet because of limited resources at the disposal, the study has been restricted to one district and two crops only and could not be extended to larger areas and more crops. Individual's biases and prejudices on the part of the respondents might have influenced the findings of the study

because the field level investigation was based on individual's perception and expressed opinion of the respondents under study. However, from inter-checks of different elements of the data no systematic biases are, however apparent.

The present study has been restricted to the sample farms taken from the arum and mustard growing parts of Murshidabad district, West Bengal. Therefore, the results obtained are area specific. However, due to its demonstration of the various issues and aspects of the problem, the study might have much wide application and this could be extended to other similar areas.

Agricultural marketing Reform: Traditional and Emerging marketing Method

Regulated Agricultural Market in most part of the country was established under the regulation of state Agriculture Produce Market Committee (APMC) Acts. The APMCs were established at the places where bulks of agricultural commodities arrive for sell. The main role of APMC is to organize trade for the sellers and buyers. The assembling points of agricultural commodities were APMC exists are mainly big 'Madis'. The main object behind creation of APMC was to protect the farmer from exploitation of middlemen and ensure better price for their commodities. But the committee being operative for last fifty years, has yet to achieve any impressive success in this spheres has yet to achieve. Monopolistic character of the government regulated APMC prevents entry of intermediaries in the market consequently competitive marketing system could not be developed. The APMC also fails to provide farmers for direct marketing of commodities, organize retailing, smooth supply of raw materials to agro-processing industries and adaptation of innovative marketing system and marketing technology. Due that difficulties, the participation of private sector or corporate in the marketing system was tentative.

With a view to making agricultural marketing more competitive growth oriented the APMC was Act was amended 2003. It is expected that the amendment would encourage developing competitive agricultural marketing, deregulation marketing system and promoting private investment in the management and development of agricultural markets in India. The impact of this amendment is yet to achieve optimal result. It is evident from the fact that duly a few state have adopted it and that too partially. However, it is expected that they amendment will minimize the consumer prices and maximum farmers realisation. It is also expected that private investment also help to develop market infrastructure and improve the market efficiency

Features of Traditional and Emerging Marketing Channels

Direct sale of produce to the consumer is obviously most preferred mode of sale as market efficiency as well as the producers' share in consumers' price is inversely proportional to the length of marketing channel. Stretching of marketing channel depends on the system of marketing and the system of marketing, which is operative through ages is traditional and reformative changes therein is

emerging marketing channel. Higher the length of marketing channel lowers the market efficiency and vice-versa.

Traditional Marketing Channel

Traditional marketing channel is characterized by high trader's margin and several intermediaries each of whom add to cost. In West Bengal most of the agricultural commodities are sold through the traditional marketing channel. Hence, farmers share to the consumer's price is considerably low. The Mickensey report observed that in a developed marketing system, the farmers usually received 40 per cent to 70 per cent of final retail price but in India they receive as less as 25 per cent of final consumer price. On the whole the feature of Traditional marketing system of agricultural commodities in the state is that the existing market system is mainly dominated by the traders, appropriate and effective linkage between the producer and sellers continue to be weak, absence of rural road connectivity, poor access to market infrastructure, in proper management of existing available market infrastructure, lack of market intelligence and lake of credit support. Moreover, primary rural market (hats) is not equipped even with basic facilities like platform for sale and auction, electricity, drinking water, road linkage, etc. All most all agricultural commodities of rural areas in West Bengal are being traded in such traditional agricultural markets.

Emerging Marketing channel

With the latest amendment of APMC Act, it is expected that a right set of reform would, takes place in the existing (traditional) marketing system of agricultural commodities. So that price realization for farmers can be increased significantly through lowering market costs and market margin of the intermediaries. But marketing channel having such reformative quality is yet to develop in West Bengal. However, in case of trading some fruit and vegetables there exists a different type of marketing system in which the farmers sell their produce like, Arum or Mango at field level. Then it is responsibility of the purchaser (Trader) to harvest and market the same. In this form of marketing the farmers not pay any marketing cost. But it is obvious that the same includes high market marginal (profit) of the trader. One of such trading system a vegetable crop has been considered for emerging channel of marketing of agricultural commodities for the study.

Main finding

Primary data for in-depth survey has been collected from farmers and market incendiaries Crop considered for looking into the efficiency of marketing are Arum and mustard. Arum is selected for emerging Marketing Channel (EMC) which mustard for Traditional Marketing Channel (TMC). Main findings of the study are follows:

Before taking up the discussion of market operations of EMC and TMC, a resume of the farmer's profile is needed to be discussed. The sample farmers are classified by their size of land holding majority farmer of both the EMC and TMC group is marginal farmers. They accounts for

64.75 per cent and 59.34 per cent total area of arum and mustard respectively. However, the small and medium farmers are occupying 26.42 per cent and 8.83 per cent of the total area of arum respectively and 28.66 per cent and 12.00 per cent of total area of mustard respectively.

As regards to main occupation of the sample farmers, it is noticed that majority of the marginal farmers of the EMC group have allied activities while agriculture the main occupation of majority of sample marginal farmers of TMC groups. In case of the small and medium farmers, the main occupation is agriculture for both the groups of sample farmers. On the whole, agriculture is main occupation of the majority (60.00 per cent) of the sample households,

Crops considered for for EMC and TMC are Arum and M ustard respectively. Per hectare cost of cultivations of arum of the sample farmers as a whole is Rs. 60071.98 which varies marginally across marginal, small and medium farmers. In cultivation of arum, cost of seed is highest – Rs. 23248.63 per hectare followed by labour cost – Rs. 15563.80, irrigation cost – Rs. 9456.40, cost of fertilizer – Rs. 5183.84, costs of power tiller/tractor– Rs. 3479.66 and bullock labour Rs. 2005.08 respectively. For each item of input cost, the small farmers are found to have spent more than that of marginal and medium farmers.

On the other hand, per hectare cost of cultivation, on and average, for mustard is Rs. 37913.80 in which cost of labour is highest – Rs. 15153.76 followed by cost of irrigation – Rs. 9036.58, fertilizer - Rs. 5321.07, power tiller/ tractor - Rs. 4107.94, compost - Rs. 2213.51, bullock labour – Rs. 1584.49 and seed cost - Rs. 508.43. The table reveals that the cost cultivation for mustard in case of small and medium farmers is more or less same while this costs are to some extent is lower in case of marginal farmers as compared to the former ones. Per hectare costs for cultivation of Arum and Mustard are Rs. 60071.98 and Rs. 37913.80 respectively. Out of the total cost, the share of paid out costs are 74.09 per cent in case of arum and 60.03 per cent in case of mustard.

Production and productivity of Arum is 4792.32 (qt.) and 242.04 (qt./ha.) respectively, while production and productivity of Mustard is 227.10 (qt.) and 14.34 (qt./ha) respectively. Gross return per hectare from cultivation of arum is Rs. 132657.98 and total cost of production including labour cost is Rs. 60071.98. Hence, the net returns with and without the cost of labour are Rs. 72568.00 and Rs. 88149.80 respectively. Similarly, per hectare gross return from cultivation of mustard is Rs. 41373.31 and costs of production with paid out cost and paid out plus labour cost are Rs. 22760.04 and Rs. 37913.80 respectively. Hence, the net return with paid out cost and paid out plus labour cost results to Rs. 18613.27 and Rs. 3459.51 respectively.

Price spread and marketing cost of Arum and Mustard

In the agricultural commodities prices tends to change from producer (farmer) to consumer through different intermediaries. Price paid by the consumer and price received by the producer for a specific quantity of farm produce is known as price spread. In the tables – 5.2 and 5.3 an attempt has

been made to work out the nature of price spread for the crops Arum and Mustard with the help of the data collected from field survey.

Price spread and market efficiency of Arum in EMC

It is observed from the table –2 that by selling Arum in EMC, the sample farmers received an average price of arum at Rs. 548 per quintal from the contract traders, who purchase entire amount of Arum at post matured stage at field. In this process of transaction, no cost involves to farmer for harvesting and marketing of their cultivated crop. Hence, net profit (Rs. /Qtl.) incurs to the cultivators after ducting paid out cost is Rs. 364.20 per quintal.

Now, the trader makes arrangement to dig up arum and takes away to the whole seller for sale. The process involves cost of Rs. 54.68 per quintal which is 57.89 per cent of total market cost. Net price of arum per quintal received by the trader from whole-seller is Rs. 815.08. Deducting purchase price and market cost, market margin per quintal earned by the traders is Rs. 212.46. Next, the whole-seller makes arrangements to sell out Arum to the retailer. The selling price per quintal of arum of the whole-seller is Rs. 973.35 in which their shares of market cost and market margin are Rs. 21.89 and Rs. 136.38 respectively.

The retailer's selling price of Arum is Rs. 1079.90 per quintal. In which market cost is Rs. 16.88. By selling Arum to the consumers, the retailer is able retain market margin of Rs. 89.67 per quintal.

The farmers' shares, market cost and market margin of different trading agents to consumer price are as follows:

The share of farmer to the consumer price is 50.75 per cent.
Market cost turns out to 8.64 per cent
Market margins of different trading agents as a whole are 40.61 per cent and
Ratio of market efficiency is 1.03

Price speed and Market Efficiency of Mustard in TMC

Spreading of price and market efficiency of mustard in TMC has been worked out in the table –.3. The table indicates that selling price (Rs. /Qtl.) of mustard of the sample farmers a whole is Rs. 2876.28 and the marketing cost is Rs. 26.37 i.e. (20.53%) of total market costs. Hence, the net price realised by the farmer is Rs. 2876.29 and profit (net price minus paid up cost) is Rs. 1288.59.

The selling price (Qtl./hact.) of traders is Rs. 3184.34 which involve market costs of Rs. 30.59 (29.56% of total market cost) and the margin of the trader in the selling price is Rs. 277.45 per quintal. Now, the whole-sellers are found to have sold mustard to mustard oil processing unit at local level at

the price of Rs. 3439.22 per quintal. The sale price involves market cost and market margin of the whole-seller. Marketing cost is Rs. 46.52 i.e. 44.95 per cent of total marketing cost of mustard from producer to process unit and the market margin of whole-seller is Rs. 208.36 per quintal. Finally, the shares of farmers to processor's price, markets cost and market margin are as follows:

The share farmers to the processor's price are 82.87 per cent.

Market cost is 3.00 per cent

Market margin of trader and whole-seller is 14.13 per cent and

The ratio of market efficiency is 4.88

Table 2: Price spread and marketing cost of Arum – an EMC Crop

(in Rs./qt)

1.	Price received by the farmers from contract Trader	548.09
	Marketing cost of the farmers	Nil
	Net price received by the farmers	548.00
	Net profit (Net Price minus Paid up Cost)	364.20
2.	Market Cost and Margin of Traders	
	Cost of lifting arum	17.00
	Packaging cost	14.80
	Pottering cost	10.00
	Transport cost	9.56
	Misc. cost	3.32
	Traders margin	212.46
	Purchase price, market cost and margin of traders	815.08
3.	Market Cost and Margin of Wholesalers	
	Pottering cost	3.57
	Storage cost	4.20
	Mandi fee	12.00
	Misc. Cost	2.12
	Wholesalers margin	136.38
	Purchase price, market cost and margin of wholesaler	973.35
4.	Market Cost of Margin of Retailer	
	Transport cost	12.00
	Misc. Expenses	4.88
	Retailers margin	89.67
	Sale price of retailers/ Consumers price	1079.90
5.	Farmers' Share in the Retailers' Price (%)	50.75
6.	Marketing Cost as % of Retailers' Price	8.64
7.	Market Margin as % of Retailers' Price	40.61
8.	Modified Measures of Marketing Efficiency [ME =FP/(MC+MM)]	1.03

Table 3: Price spread and marketing cost of mustard – a TMC Crop

(in Rs./qt)

1.	Price received by the farmers from traders/ commission agents	2876.28
2.	Total Marketing Cost of Farmers	
	Transport cost	14.25
	Loading and Unloading	12.12
	Weighing and others	--
	Commission	--
	Net price received by the farmers	2876.29
	Net profit (Net Price minus Paid up Cost)	1288.59
3.	Purchase Price plus Marketing Cost and Marketing Margin of the Traders/ Commission Agents	3184.34
	Transport cost	20.45
	Loading and Unloading	10.16
	Market Fee	--
	Traders margin	277.45
4.	Purchase Price of Wholesalers plus Marketing Cost and Marketing Margin	3439.22
	Transport cost	23.52
	Loading and Unloading	12.00
	Storage	8.00
	Misc. Cost	3.00
	Wholesalers margin	208.36
5.	Purchase Price of Processing Unit	3439.22
6.	Share of Farmers to Processor Price	82.86
7.	Marketing Cost as % of Processor Price	3.00
8.	Marketing Margin as % of Processor Price	14.13
9.	Modified Measures of Marketing Efficiency [ME = FP/(MC+MM)]	4.88

The higher ratio of market efficiency in case of mustard a TMC crop does not reflect on the efficiency of market. Because, the consumer price of mustard is the consumer price of mustard oil. The processor converts mustard into mustard oil which reaches to the consumer through another set of marketing channels. The limitation of the study is that data for the second set of marketing channel are not collected for detail analysis.

Benefit cost ratio for Arum & Mustard

The table – 5.4 shows that benefit cost ratio lends to reduce with inclusion of imputed value of family labour. According the table- 4 the BCR is almost same for both the EMC and TMC crop.

Table 4: Benefit cost ratio for Arum & Mustard

Cost of production/ha of Arum for EMC with paid out cost	Cost of production/ha of onion for TMC only with paid out cost	Cost of production/ha of Arum for EMC with family labour	Cost of production/ha of mustard for TMC with family labour
2.38	1.24	2.21	1.09

Wastage of Crops

Crop cultivation inevitably involves some wastage during harvesting and storage of crops. The extent of loss/wastage of Arum and Mustard during harvest threshing storage and transport etc. is 2.86 per cent and 0.55 per cent respectively. Wastage occurs for Arum during harvesting (2.61%), storage (0.20%) and retail marketing level (0.05%) while wastage occurs for Mustard during threshing (0.30%) and storage (0.25%).

Reasons of Preferring Existing Marketing Channel

The sample farmers of both the EMC and TMC inform the following reasons to word preferring marketing channels, which are habit (18.89% for EMC and 17.69 % for TMC) followed by higher/fair price (16.36 % for EMC and 15.44% for TMC), low cost of marketing (12.89% for EMC and 11.27% for TMC) and time taking in other channel (12.22% for EMC and 11.56% for TMC). Apart from these, other reasons for preferring this channels are less physical hazards in marketing commodities, proximity, absence hidden cost etc. supervising service and better infrastructure.

Since, the trade of sample farmers of Arum and Mustard take place at farmers' house or at local weekly 'hats' (market place), market mechanism of regulated market – which is far from their residence - is almost unknown to them. It is, therefore, information's about regulated markets from the sample farmer's side cannot be incorporated in the study.

Finally, it might be noted that the sample farmers of Arum and Mustard do not have any access to either loan input and agricultural tools and implements from the buyer. They also never avail any extension services from any formal or informal marketing agencies.

Policy Implication

In West Bengal, trade of agricultural commodities takes place through traditional marketing channel, which is dominated by the traders. There is absence of appropriate and effective linkage between the producers and sellers. Market infrastructure are insufficient, even there is poor access to basic facilities at the market places. Since the market is mainly controlled by so major intermediaries, market costs and market margin are high. Hence, commodities become costlier to the consumer and this reduce producer's share to the consumer price. In this state of affairs government intervention through appropriate policies and development packages is essentially required [Attn. to the market Departments of the Ministry of Agriculture of both Central & State Government].

In spite of reformative changes in Agricultural Produce Market Committees Act, only a nominal action has been initiated for introducing the reform by the government of West Bengal. It may be due resistance from the traders and commission agents who fear for losing business and income, if an alternative marketing establishments are established. Some lobbies also stand at the back for giving support to the traders and commission agent for the same [Attn. Administrative Departments of Government of West Bengal].

Trade of vegetable crop, Arum takes place between trader and producer. Trader purchases entire cultivated crop at field level. The producer has nothing to pay for harvesting of Arum. Since number of intermediaries in such trading is minimum market cost and market margin are to some extent lower. Through this channel in not very smooth and developed, yet it is to some extent is efficient in comparison with other traditional channels where numbers of market intermediaries are high. If this marketing system is made accessibility with warehouse, cold storage, financial support and transport facilities etc. it would be an efficient marketing channel for agricultural commodities in West Bengal [Attn. marketing Department of the Ministry of Agriculture Government of West Bengal].

The existing marketing of agricultural commodities are not fitted out with basic facilities like marketing platform, road connectivity, storage, electricity, drinking water, extra premise for buyers and sellers and post harvest management, etc. If these basic facilities are be provided, the existing market condition would improve [Attn. The local level Administrative body, panchayat, Zill Parishad, Block Development Officers,etc.].

Due to absence of basic infrastructure and positive policy of the government, participation of private sector in agricultural marketing in West Bengal is limited to warehousing, cold storage and pack-houses. Hence, there is a need for comprehensive policy to attract the private sector in trading of the core agricultural commodities and other marketing activities [Attn. concerned Departments of the Central and State Government].

Some of the co-operative societies set success stories in marketing of diary product, sale of fertilizer, disbursing of agricultural credit etc. but in the field of marketing core agricultural commodities, their role too much limited. If the cooperative societies are encouraged in the field of marketing of core agricultural commodities, the extent exploitation of famer by the traders in the existing traditional marketing system could be minimize [Attn. department of co operative societies government of West Bengal].

Conclusion

On the whole, the study conclude that by selling their produce (Arum) in the emerging channel of marketing, the farmer are found to have benefitted as they do not have to pay for marketing cost. On the other hand by selling mustard in traditional marketing channels, it is assumed - as the complete picture could not be obtained from the study - that the extent of exploitation the farmers by the market intermediaries is to some extent higher. Efficient marketing channel has not developed in West Bengal as yet, so, specific policy and development plans and programmes are required for creation efficient marketing channel of agricultural commodities.