



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

Vol XXXIX  
No. 3

ISSN 0019-5014

CONFERENCE  
NUMBER

JULY-  
SEPTEMBER  
1984

# INDIAN JOURNAL OF AGRICULTURAL ECONOMICS



INDIAN SOCIETY OF  
AGRICULTURAL ECONOMICS,  
BOMBAY

EFFICIENCY OF ALTERNATIVE CHANNELS IN THE MARKETING  
OF VEGETABLES IN BELGAUM CITY — A COMPARISON

L.B. Hugar and K.C. Hiremath\*

The technological break-through in Indian agriculture has brought about spectacular increases in yield levels. This has generated new problems of marketing for which adequate attention has not been paid even though it is universally recognized that the solution of these problems is a pre-condition for agricultural prosperity.

For the farmer, with the commercialisation of agriculture, disposal of his produce has become as important as the adoption of new farm practices for improving yields from agriculture. It has come to be recognized that better and more stable prices alone can sustain the increased intensity of input use on the farms to increase production. The journey of each product from the farm to the ultimate consumer plays a crucial role in determining the prices for the farmer. Unless marketing improves no incentive to increase production will attract the cultivators. This is all the more important in the case of vegetables which cannot be stored for long periods on account of their perishable nature. In their case, the speed as well as efficiency of marketing operations is crucial in determining profits of the product, on the one hand, and the level of satisfaction of the consumer, on the other.

It is often complained that the growers, more so the vegetable growers, do not get remunerative prices for their produce while the consumers have to pay higher prices for the vegetables. The market intermediaries, more so the private agencies, are blamed for this phenomenon. One of the ways suggested to overcome this problem is to develop alternative agencies for the sale of such products. In this regard, co-operatives provide the needed answer.

The present study attempts to examine this proposition and aims at a comparison of the efficiency of two marketing channels and operational performance of commission agents vis-a-vis co-operative marketing society. More specifically, the objectives of the study are (a) to estimate the price spread and the producer's share in the consumer's rupee in different marketing channels, (b) to compare the relative share of the commission agents and the co-operative society in the total sales of vegetables, (c) to find out the distribution of different categories of producer-sellers between alternative channels, and (d) to assess the operational efficiency of the commission agents vis-a-vis co-operative society.

## METHODOLOGY

*Sampling Design*

For the present study, two markets in the city of Belgaum have been selected — the Mahatma Phule Bazi Market (Bazi market) and Shahapur Market. The former undertakes wholesale as well as retail transactions, while the latter concentrates only on retail transactions. In the Bazi wholesale market,

---

\* Department of Agricultural Economics, College of Agriculture, Dharwad-5.

ten (out of 40 in 1979 and 87 in 1984) commission agents were selected on a 'random basis' in addition to the "Belgaum Gardeners Co-operative Sales and Service Society Ltd." (hereafter referred to as the Co-operative Society) functioning in the Bazi market for this study. At retail levels, ten retailers were chosen at random from each of the two markets — Bazi market and Shahapur market. In respect of producer-sellers, 120 of them were selected at random and interviewed personally as and when they arrived at the market to dispose of their produce during the period of this study.

#### *Nature and Sources of Data*

The required data were collected from the selected market functionaries on the basis of structured and pre-tested schedules. The commission agents and the Co-operative Society were contacted to collect information in regard to the quantity handled, sale prices, commission charged, costs incurred, number of workers employed, capital invested, licence fee and taxes and other maintenance expenses incurred. They were also requested to give their impressions about the overall working of the market and the regulations governing the market.

Similarly, the retailers were interviewed to elicit information on the quantity and value of vegetables purchased, the agency from whom purchased, value and quantity sold, buying prices, selling prices, quantity left unsold, wastages, costs incurred, capital invested, etc.

Producer-sellers were interviewed to elicit information regarding the size of the farm, details of vegetables grown, distance from the market, mode of packaging and transportation with their costs, costs incurred on loading and unloading, hire charges, etc. Information on the particulars of sale included the quantity of produce sold, method of sale, agency selected for sale, prices realised and the commission charges paid, reasons for the preference between the commission agents and the Co-operative Society, etc.

#### *Period of Study*

The study was made in two periods of time, the first one was carried out in 1979 and later the same study was repeated in 1984, with additional information to find out the changes in the structure, functioning and performance of various market functionaries and also to up-date the information on the marketing of vegetables. The study was restricted to the peak period of arrivals of two vegetables selected for this study, namely, cabbage and brinjal at the Bazi market in Belgaum city, i.e., in the month of January in both 1979 and 1984.

#### *Analytical Tools and Techniques Employed*

For evaluating the objectives of the study, the technique of tabular analysis was generally followed. The relevant data were processed, converted into averages and percentages and finally compared with respect to different vegetables and also with respect to different marketing channels over the period under review.

### *Evaluation of Efficiency of Alternative Channels*

Definite criteria for evaluating such efficiency have lacked proper perspective. However, the marketing efficiency of alternative channels was evaluated under two heads: (1) economic efficiency and (2) operational efficiency.

#### *Economic Efficiency*

It has been assumed that a reduction in the marketing costs and increase in the prices made available to the farmers would, by themselves, amount to an improvement in efficiency. Hence, the economic efficiency of marketing through different channels, was evaluated by using following criteria: (a) Marketing margin, (b) Price received by the producer, (c) Cost of marketing and (d) Profit share.

The above criteria were estimated by working out the price spread by using mode method. The price spread was worked out separately for the two vegetables under each of the two existing channels. The following marketing channels were identified for this purpose.

Channel I : Producer-seller → Commission Agent → Retailer → Consumer.

Channel II : Producer-seller → Co-operative Society → Retailer → Consumer.

#### *Operational Efficiency*

For evaluating the operational efficiency of the commission agents and the Co-operative Society, the following criteria were adopted:

(a) Net returns (commission received – costs incurred) were converted into percentages of the value of the products handled. The higher percentage was taken as a proxy for greater efficiency.

(b) Net returns were converted into percentages of capital invested. The higher rate of return on investment was taken as an index of greater efficiency.

(c) Commission received was converted into a ratio of the costs incurred. This ratio was taken as a measure of efficiency.

In addition to the two main criteria of economic efficiency and operational efficiency, the performance of alternative channels of marketing was compared with the help of their popularity among different categories of farmers and market share of alternative channels in the total sales of vegetables.

#### *Classification of Farmers*

The farmers were classified into small, medium and large categories on the basis of the output of vegetables sold by them, as follows:

Category	Output of vegetables sold (quintals)
Small	Upto 0.50
Medium	0.51 – 2.00
Large	Above 2.00

## RESULTS

*Price Spread under Different Channels*

The details of costs incurred and profit margins obtained by different market functionaries under both the channels for the selected vegetables for 1979 and 1984 are presented in Table I. It could be seen from the table that the marketing margins under channel I were higher than those under channel II for both

TABLE I — MARKETING MARGINS UNDER DIFFERENT CHANNELS

(Rs./quintal)

Particulars	Channel I (Commission agents)				Channel II (Co-operative Society)			
	Cabbage		Brinjal		Cabbage		Brinjal	
	1979	1984	1979	1984	1979	1984	1979	1984
<b>A. Costs incurred</b>								
1. Producers	3.44 (3.64)	4.38 (4.16)	3.99 (4.70)	4.38 (3.89)	3.38 (3.58)	3.38 (3.21)	3.87 (4.56)	3.72 (3.30)
2. Wholesalers	2.17 (2.29)	1.07 (1.02)	0.42 (0.50)	1.21 (1.07)	1.39 (1.47)	1.85 (1.75)	1.31 (1.54)	1.67 (1.48)
3. Retailers	1.67 (1.77)	1.78 (1.69)	1.53 (1.80)	1.59 (1.41)	1.67 (1.77)	1.78 (1.69)	1.53 (1.80)	1.59 (1.41)
Total	7.28 (7.70)	7.23 (6.86)	5.94 (7.02)	7.18 (6.38)	6.44 (6.81)	7.01 (6.65)	6.71 (7.90)	6.98 (6.20)
<b>B. Profits earned</b>								
1. Wholesalers	2.11 (2.23)	4.02 (3.81)	4.21 (4.96)	3.93 (3.49)	2.21 (2.33)	2.15 (2.04)	2.22 (2.62)	1.94 (1.72)
2. Retailers	34.83 (36.96)	41.74 (39.61)	28.41 (33.49)	50.48 (44.86)	31.72 (33.56)	41.74 (39.61)	24.45 (28.83)	50.48 (44.86)
Total	36.94 (39.08)	45.76 (43.43)	32.62 (38.45)	54.41 (48.36)	33.93 (35.90)	43.89 (41.65)	26.67 (31.44)	52.42 (46.59)
<b>C. Marketing margin</b>	44.22 (46.78)	52.99 (50.29)	38.56 (45.46)	61.59 (54.74)	40.37 (42.71)	50.90 (48.31)	33.38 (39.35)	59.40 (52.79)
<b>D. Net price received by producers</b>	50.30 (53.22)	52.38 (49.71)	46.27 (54.54)	50.93 (45.26)	54.15 (57.29)	54.47 (51.69)	51.45 (60.65)	53.12 (47.21)
<b>E. Retail price</b>	94.52 (100.0)	105.37 (100.0)	84.83 (100.0)	112.52 (100.0)	94.52 (100.0)	105.37 (100.0)	84.83 (100.0)	112.52 (100.0)

Note: — Figures in parantheses indicate percentages to the retail price.

the commodities in both the years of study. Further, there was an increase in the marketing margins for both the commodities under both the channels, indicating a decline in the efficiency of the marketing mechanism over the period under review. However, the increase in the marketing margins was found to be much greater in the case of brinjal as compared to cabbage,

suggesting greater exploitation of the producers of brinjal compared to those producing cabbage. Similarly, the increase in the marketing margins over the five-year period was greater in the case of the Co-operative Society as compared to commission agents in the case of both the commodities, implying a greater decline in the efficiency of the Co-operative Society compared to that of the commission agents. For cabbage, the increase in the marketing margins came to Rs.8.77 per quintal under channel I, as against an increase of Rs.10.53 per quintal under channel II. In the case of brinjal, the corresponding increases came to Rs. 23.03 per quintal and Rs.26.02 per quintal.

Consequently, the share of the producer-seller in the consumer's rupee over the five-year period registered a decline in both the commodities under both the channels, the decline being greater in channel II. The decline in the share of the producer-seller in the consumer's rupee in the case of cabbage was 3.51 per cent under channel I, compared to 5.60 per cent under channel II. The corresponding decline in the case of brinjal was 9.28 per cent under channel I and 13.44 per cent under channel II. This suggested that the Co-operative Society, despite its edge over the commission agents, had lost its efficiency vis-a-vis the commission agents over the period under review. During 1979, the difference in the price received by the producer-sellers of cabbage came to Rs.3.85 per quintal in favour of the Co-operative Society. By 1984, this difference came down to Rs.2.09 per quintal. In the case of brinjal, the price difference during 1979 came to Rs.5.18 per quintal. By 1984, the difference had fallen to Rs.2.19 per quintal.

This, perhaps, explained the fall in the market share of the Co-operative Society in the case of both cabbage and brinjal vis-a-vis the share of commission agents, as shown in Table II.

TABLE II—MARKET SHARE OF COMMISSION AGENTS AND CO-OPERATIVE SOCIETY

Marketing agency/ Channels	(quintals)			
	Cabbage		Brinjal	
	1979	1984	1979	1984
Commission agents (Channel I)	4,054.96* (74.96)	4,180.35* (76.82)	1,414.24* (67.32)	2,905.80* (77.33)
Co-operative Society (Channel II)	1,354.80 (25.04)	1,261.60 (23.18)	686.65 (32.68)	851.90 (22.77)
Total	5,409.76 (100.00)	5,441.95 (100.00)	2,100.89 (100.00)	3,757.70 (100.00)

\* The projected figures for all the commission agents (40 commission agents in 1979 and 87 commission agents in 1984) existing in the market based on the sample figures.

Figures in parentheses indicate percentages to the total quantity of vegetable handled.

*Market Shares of the Commission Agents and  
the Co-operative Society*

As mentioned earlier, the share of the Co-operative Society in the total sales of both cabbage and brinjal was much lower (Table II) as compared to commission agents in both the years. This might be due to a large number of respondents who sold through the commission agents, compared to Co-operative Society (Table III). Further, the share of the commission agents in the

TABLE III --- DISTRIBUTION OF RESPONDENTS OF DIFFERENT SIZE-GROUPS OF  
FARMERS UNDER DIFFERENT CHANNELS OF MARKETING (1984)

Size-groups of farmers	Cabbage			Brinjal		
	Channel I	Channel II	Total	Channel I	Channel II	Total
Small	32.00 (94.12)	2.00 (5.88)	34.00 (100.0)	26.00 (89.66)	3.00 (10.34)	29.00 (100.00)
Medium	21.00 (72.41)	8.00 (27.59)	29.00 (100.0)	18.00 (85.71)	3.00 (14.29)	21.00 (100.00)
Large	15.00 (50.00)	15.00 (50.00)	30.00 (100.0)	11.00 (55.00)	9.00 (45.00)	20.00 (100.00)
Total	68.00 (73.12)	25.00 (26.88)	93.00 (100.0)	55.00 (78.57)	15.00 (21.43)	70.00 (100.00)

Figures in parentheses indicate percentages to the total quantity of vegetables.

market sales in both the commodities had increased over the period under review—more so in the case of brinjal. By contrast, there was a decline in the proportion of the quantity handled by the Co-operative Society, both for cabbage and brinjal especially in the case of brinjal. This could be attributed to the greater decline in the share of the producer in the consumer's rupee over the period under review under channel II, as explained earlier. The decline in the share in the case of brinjal was much sharper presumably due to greater increase in marketing margins (see Table I).

*Relative Popularity and Effectiveness of Different Channels*

The above findings were sought to be empirically verified for the year 1984 with the help of data obtained from the sample farmers and presented in Tables III and IV.

As could be seen from Table III, the majority of the farmers (73.12 per cent in cabbage and 78.57 per cent in brinjal) were attached to channel I. Only one-fourth of the producer-sellers of cabbage and one-fifth of those selling brinjal could be attracted by the Co-operative Society. This suggested the relative popularity of the commission agents among producer-sellers in the case of both the commodities. Moreover, the proportion of small farmers attached to the

TABLE IV — DISTRIBUTION OF QUANTITY SOLD BY DIFFERENT SIZE-GROUPS OF FARMERS UNDER DIFFERENT CHANNELS OF MARKETING (1984)

(quintals)

Size-groups of farmers	Cabbage			Brinjal		
	Channel I	Channel II	Total	Channel I	Channel II	Total
Small	14.75 (93.95)	0.95 (6.05)	15.70 (100.0)	11.65 (89.27)	1.40 (10.73)	13.05 (100.0)
Medium	29.60 (65.63)	15.50 (34.37)	45.10 (100.0)	32.50 (93.26)	2.35 (6.74)	34.85 (100.0)
Large	118.21 (70.76)	48.85 (29.24)	167.06 (100.0)	27.70 (57.17)	20.75 (42.83)	48.45 (100.0)
Total	162.56 (71.34)	65.30 (28.76)	227.86 (100.0)	71.85 (74.57)	24.50 (25.43)	96.35 (100.0)

Figures in parentheses indicate percentages to the total quantity of vegetables.

commission agents was higher as compared to that of the Co-operative Society. By contrast, the Co-operative Society had given more attention towards medium and large farmers. This finding was confirmed when the quantities sold through the two channels were compared.

As shown in Table IV, the Co-operative Society handled only 28.76 per cent of the total quantity of cabbage and 25.43 per cent of brinjal sold in the market. The relative proportion of the quantity sold through channel II was higher compared to the relative proportion of the number of farmers selling the same. This was presumably due to the fact that a relative higher percentage of medium and large farmers sold their produce through the Co-operative Society, compared to the proportion of small farmers selling through this channel. Since the quantity sold by medium and large farmers was higher, the proportion of the Co-operative Society in the total quantity handled naturally exceeded the proportion of the farmers attracted.

#### *Operational Efficiency of the Commission Agents and the Co-operative Society*

For assessing the operational efficiency of the commission agents and the Co-operative Society, multiple criteria were adopted, as stated earlier. The relevant details are presented in Table V. As shown in the table, the percentage of net returns to the value of products handled was found to be higher in the case of commission agents compared to the corresponding percentages for the Co-operative Society for both the years. What was more striking, this percentage had increased rapidly from 4.64 per cent in 1979 to 5.32 per cent in 1984 in the case of commission agents. In the case of the Co-operative Society, the increase was only marginal from 3.25 per cent to 3.28 per cent during the same period. This implied that the Co-operative Society had not been able to improve

TABLE V — OPERATIONAL EFFICIENCY OF THE COMMISSION AGENTS AND THE CO-OPERATIVE SOCIETY

Particulars	Commission agents*		Co-operative Society	
	1979	1984	1979	1984
1. Percentage of commission charged to value of products	6.98	7.46	5.64	6.10
2. Percentage of costs incurred to value of products	2.34	2.14	2.39	2.82
3. Percentage of net returns to value of products	4.64	5.32	3.25	3.28
4. Percentage of commission to capital invested	3.26	5.55	1.78	1.52
5. Percentage of costs to capital invested	1.09	1.59	0.75	0.70
6. Percentage of net returns to capital invested	2.17	3.95	1.02	0.81
7. Commission received as a multiple of cost incurred	2.98	3.49	2.35	2.17

\* Average figures for the selected commission agents.

its performance to the same extent as the commission agents, it was due partially to the greater increase in its costs and partially due to smaller increase in the amount of commission earned. While the percentage of costs to turnover had declined in the case of commission agents from 2.34 per cent in 1979 to 2.14 per cent in 1984, the corresponding percentage of the Co-operative Society instead of decreasing had actually increased from 2.39 to 2.82 per cent during the same period.

When net returns were considered in relation to capital invested, the picture that emerged was found to be even more disastrous. While the commission agents had recorded an increase in the rate of investment from 3.26 to 5.55 per cent, the Co-operative Society had recorded a decline in its rate of investment from 1.78 to 1.52 per cent. This clearly indicated that the Co-operative Society which was already getting about half of the rate on investment vis-a-vis the commission agents in 1979, got only one-fifth of the return obtained by the commission agents on their total investment during 1984. This was in part due to the low rate of commission, on the one hand and the higher amount of capital invested, on the other.

#### OVERALL APPRAISAL

From the major findings of the study outlined in the preceding pages, it could be evident that the Co-operative Society which was showing a better performance in 1979 from the view-point of the prices made available to the

producer-sellers, had lost its popularity as well as effectiveness vis-a-vis the commission agents in 1984. Its costs of operation increased faster. The gap in prices availed by the producer-seller has narrowed down. The commission agents have annexed a part of its business. In terms of operational efficiency, the deterioration has been still greater. The net returns as a percentage of turnover also declined. As a percentage of capital invested, the decline in net returns is still greater. The percentage of costs incurred to the commission earned has gone up, despite an increase in the amount of capital invested. This calls for urgent steps to reverse the trends. The Co-operative Society, in spite of several years of its existence, has miserably failed to attract small farmers.

If the Co-operative Society is to be saved from the inevitable impending crises, it must seriously think over its costs, commission rates and the amount of capital placed at its disposal. It must explore the possibilities of attracting a wider section of the small farmers towards the orbit of its operations by facilitating payments and making advances in anticipation of procuring the vegetables from the loanees as and when the crops mature. The commission agents, as reported by the majority of the producer-sellers, extend this facility and there seems to be no reason why the Co-operative Society should not. If the bye-laws of the Co-operative Society insist on tangible security against such advances, the same should be amended and modified. Another line of reform which it can introduce could be to make necessary arrangements to lift small and scattered lots of vegetables through its own agents and 'pool' them for the purposes of transportation. This would cut down the costs of the producer-sellers and the inconveniences to which they are subjected to in the process of bringing their produce to the market. Perhaps, insistence on grading of vegetables could also be adopted to ensure better prices for the producer and higher commission for the Co-operative Society. Such a step would not only promote its operational efficiency but what is equally important, would also increase its popularity among the farmers.

There is no reason for disappointment or frustration. The Co-operative Society, in spite of its declining efficiency, is still procuring better prices and showing lower marketing margins. If the steps suggested are adopted and implemented, its operational efficiency can be expected to go up within a reasonable time.