

Original Research Article

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Economics of Winter Vegetables Marketing in Bishnupur District of Manipur, India

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ABSTRACT

Keywords

Marketing efficiency, Middlemen, Price spread, Marketing cost and Marketing margin

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The study was conducted in Bishnupur district of Manipur with the overall objectives of analysing the marketing cost and marketing margin, price spread, marketing efficiency of different channels, factors influencing marketing efficiency. Primary data on production, sale to different agencies, prices, marketing cost in different channels etc. were collected from 100 farmers using simple random sampling technique. The vegetables like were sold through three channels viz. (i) Channel I: Producer → Village trader → Wholesaler → Retailer → Consumer (ii) Channel II: Producer → Retailer → Consumer (iii) Channel III: Producer → Consumer. The channel I was found to be more preferred channel for broad bean as about 79.01 per cent was sold through this channel. Likewise, cabbage, cauliflower and pea were 78.07 per cent, 78.96 per cent and 81.63 per cent respectively. The major reason behind popularity of this channel was that farmers could sell their produce on their doorsteps as in bulk quantity and mainly getting of credit by the village traders by farmers. Despite having higher marketing efficiency in channel III followed by channel II because of involvement of less middlemen.

Introduction

The growing importance of vegetables in Indian economy can be well appreciated in terms of their rising domestic demand on account of increase in population and per capita income; their increasing export potential and increased vegetables consumption urban and rural area; need for providing employment opportunities in the rural area, and vegetables being relatively more remunerative crops. It can be grown within a short time period and more than one crop can be grown within a crop season. There are a large number of vegetables having

different varieties, which can be grown throughout the year. However, the largest numbers of vegetables are grown according to climatic condition and irrigation facilities. In north eastern state of Manipur growing of temperate vegetables like broad bean, cabbage, cauliflower and pea are prominent during the period of time and marketing of these vegetables from valley areas to other regions of the state in an efficient manner with different marketing functionaries. Manipur is situated in the north eastern region of the country of the total geographical area, about nine-tenths constitute the hills, which surround the remaining one-tenth of the

valley area. Agriculture is the mainstay of the state's economy. It engages about 76 per cent of the total workforce of the state. The size of the cultivated area is, however only 9.41 per cent of the total geographical area of the state. Of this cultivated area, 52 per cent is confined to the valley area. About 67 per cent of the total population of the valley region is engaged in agriculture. With the technological development in the agricultural field, India has made rapid stride in horticulture too along with increased food grain production.

Materials and Methods

The study was conducted in Bishnupur district of Manipur using Multi-stage sampling method was followed (Ashok, M.V. and Himanshu Pandey) for the selection of following steps. Out of the three blocks, two blocks selected purposively in that each block five villages selected purposively, in that each village 10 farmers selected randomly and totally 100 sample farmers selected. The data was collected through personal interview method through a structured developed pre-tested schedule. The collected data were analyzed using appropriate marketing formula, statistical tools and analysis.

Results and Discussion

Channel-wise marketing cost and marketing margin of broad bean is shown in table 1. Marketing cost and marketing margin vary considerably from channel to channel and were related directly to the length of the channel, *i.e.*, longer the channel, more were the marketing cost and marketing margin. Channel 1 (Producer - Village trader - Wholesaler - Retailer - Consumer) being the longest channel and in this channel the highest marketing cost and marketing margin per quintal, *i.e.*, Rs. 423.28 and Rs. 2231.49 respectively were observed. Channel III (Producer - Consumer) is the shortest channel

accounting for lowest marketing cost, *i.e.*, Rs.88.27 per quintal. Channel 2 (Producer - Retailer - Consumer) is the next shortest channel accounting for lower marketing cost and marketing margin, *i.e.*, Rs. 304.11 and Rs. 897.05 per quintal respectively. Thus it can be concluded that as the length of channel increases the marketing cost and marketing margin also increases and vice-versa.

The price spread of broad bean marketed in imphal market through different channels of trade is presented in table 2. The perusal of the table indicates that the producers share in consumer rupees was highest in channel III (98.96 %) followed by channel II and channel I (86.65 % & 72.05 %) respectively. The producers, who sold their produce through channel I, channel II and channel III received Rs. 68.45, Rs. 77.98 and Rs. 84.12 per kg respectively. The total marketing cost paid by the producer formed 4.24, 3.05, and 0.88 percent of consumer's rupee in case of channel I, channel II, and channel III respectively. Marketing margin incurred per kg by the producers was highest in channel I (23.5 %) than channel II (9.98 %). Therefore it is clear from the table 3 that channel III can be considered to be the most efficient among the different channel for sale of broad bean.

The result indicates that in all the selected markets, there were information linkages about the broad bean prices and its arrival in other markets.

The findings of multiple linear regression model is presented in table 4. that shows negative and significant relationship between marketing efficiency and marketing cost and marketing margin. The volume of produce had positive and significant relationship which shows that large broad bean farmers fetched better prices in the market. Though increasing numbers of market intermediaries had negative relationship with marketing

efficiency yet this factor was not significant on the marketing efficiency of broad bean.

Channel-wise marketing cost and marketing margin of cabbage is shown in Table 5. Marketing cost and marketing margin vary considerably from channel to channel and were related directly to the length of the channel, *i.e.*, longer the channel, more were the marketing cost and marketing margin. Channel I (Producer - Village trader - Wholesaler - Retailer - Consumer) being the longest channel and in this channel the highest marketing cost and marketing margin per quintal, *i.e.*, Rs. 361.1 and Rs. 791.83 respectively were observed. Channel III (Producer - Consumer) is the shortest channel accounting for lowest marketing cost, *i.e.*, Rs.48.47 per quintal. Channel 2 (Producer - Retailer - Consumer) is the next shortest channel accounting for lower marketing cost and marketing margin, *i.e.*, Rs. 186.71 and Rs. 462.19 per quintal respectively. Thus it can be concluded that as the length of channel increases the marketing cost and marketing margin also increases and vice-versa.

The producers who sold their produce through channel I, channel II and channel III received Rs. 18.47, Rs. 13.51 and Rs. 17.49 per kg respectively. The total marketing cost paid by the producer formed 3.62, 1.87, and 0.6 percent of consumer's rupee in case of channel I, channel II, and channel III respectively. Marketing margin incurred per kg by the producers was highest in channel I (26.39 %) than channel II (23.11 %). Therefore it is clear from the table 6 and 7 that channel III can be considered to be the most efficient among the different channel for sale of cabbage.

The result indicates that in all the selected markets, there were information linkages about the cabbage prices and its arrival in other markets.

The findings of multiple linear regression model is presented in table 8. that shows negative and significant relationship between marketing efficiency and marketing cost and marketing margin. The volume of produce had positive and significant relationship which shows that large cabbage farmers fetched better prices in the market. Though increasing numbers of market intermediaries had negative relationship with marketing efficiency yet this factor was not significant on the marketing efficiency of cabbage.

Channel I (Producer - Village trader - Wholesaler - Retailer - Consumer) being the longest channel and in this channel the highest marketing cost and marketing margin per quintal, *i.e.*, Rs. 325.91 and Rs. 1814.78 respectively were observed. Channel III (Producer - Consumer) is the shortest channel accounting for lowest marketing cost, *i.e.*, Rs.46.54 per quintal. Channel 2 (Producer - Retailer - Consumer) is the next shortest channel accounting for lower marketing cost and marketing margin, *i.e.*, Rs. 231.75 and Rs. 938.56 per quintal respectively. Thus it can be concluded that as the length of channel increases the marketing cost and marketing margin also increases and vice-versa (Table 9).

The producers, who sold their produce through channel I, channel II and channel III received Rs. 33.59, Rs. 28.3 and Rs. 37.5 per kg respectively. The total marketing cost paid by the producer formed 5.93, 5.79, and 0.5 percent of consumer's rupee in case of channel I, channel II, and channel III respectively. Marketing margin incurred per kg by the producers was highest in channel I (32.99 %) than channel II (24.5 %). Therefore it is clear from the table 10 and 11 that channel III can be considered to be the most efficient among the different channel for sale of cauliflower.

The result indicates that in all the selected markets, there were information linkages about the cauliflower prices and its arrival in other markets.

The findings of multiple linear regression model is presented in table 12 and shows negative and significant relationship between marketing efficiency and marketing cost and

marketing margin. The volume of produce had positive and significant relationship which shows that large cauliflower farmers fetched better prices in the market. Though increasing numbers of market intermediaries had negative relationship with marketing efficiency yet this factor was not significant on the marketing efficiency of cauliflower.

Table.1 Marketing cost and marketing margin of broad bean (Rs/q)

Item	Channel 1	Channel 2	Channel 3
	Cost	Cost	Cost
Farm gate price	6845.26	7798.83	8411.73
Marketing Cost			
Producer	154.77 (36.56)	201.16 (66.15)	88.27 (100)
Trader	85.41 (20.18)	-	-
Wholesaler	74.72 (17.65)	-	-
Retailer	108.38 (25.60)	102.95 (33.85)	-
Total Marketing Cost	423.28	304.11	88.27
Marketing Margin			
Trader	914.59 (40.98)	-	-
Wholesaler	425.28 (19.06)	-	-
Retailer	891.62 (39.95)	897.05 (100)	-
Total Marketing Margin	2231.49	897.05	-
Consumer Price	9500	9000	8500

Table.2 Price spread of broad bean through different marketing channel (Rs/kg)

S. No	Particulars	Channel I		Channel II		Channel III	
		Rs.	%	Rs.	%	Rs.	%
1.	Net price received by the farmers	68.45	72.05	77.98	86.65	84.12	98.96
2.	Marketing cost	4.24	4.45	3.05	3.37	0.88	1.04
3.	Marketing margin	22.31	23.5	8.97	9.98	0	0
4.	Price paid by the consumer	95	100	90	100	85	100

Table.3 Correlation matrixes for broad bean prices in different selected markets

Markets	Bishnupur	Nambol	Imphal
Bishnupur	1		
Nambol	0.941**	1	
Imphal	0.980**	0.962**	1

** Correlation is significant at the 0.01 level (2- tailed)

Table.4 Factors affecting marketing efficiency of broad bean

S. No.	Factors	Coefficient	't' value
1.	Constant	3.913	0.360
2.	Marketing cost (X_1)	-0.106***	-2.524
3.	Marketing margin (X_2)	-0.029*	-1.589
4.	Volume of the produce handled (X_3)	0.434***	4.956
5.	Length of the market channel (No. of market intermediaries) (X_4)	-3.110	-1.070
6.	R^2		0.544
7.	Adjusted R^2		0.517
8.	No. of observation (n)		100

Note: ***, * indicate significance at 1 percent, 10percent level respectively

Table.5 Marketing cost and marketing margin of cabbage (Rs/q)

	Channel 1	Channel 2	Channel 3
Item	Cost	Cost	Cost
Farm gate price	1847.07	1351.1	1749.14
Marketing Cost			
Producer	152.93 (42.35)	148.89 (79.75)	48.15 (100)
Trader	82.22 (22.77)	-	-
Wholesaler	54.64 (15.13)	-	-
Retailer	71.31 (19.75)	37.81 (20.25)	-
Total Marketing Cost	361.10 (100)	186.71 (100)	48.15 (100)
Marketing Margin			
Trader	117.78 (14.87)	-	-
Wholesaler	245.36 (30.99)	-	-
Retailer	428.68 (54.14)	462.19 (100)	-
Total Marketing Margin	791.82 (100)	462.19 (100)	-
Consumer Price	3000	2000	1800

Table.6 Price spread of cabbage through different marketing channel (Rs/kg)

S. No.	Particulars	Channel I		Channel II		Channel III	
		Rs.	%	Rs.	%	Rs.	%
1.	Net price received by the farmers	18.47	61.56	13.51	67.55	17.49	96.8
2.	Marketing cost	3.62	12.03	1.87	9.33	0.6	3.2
3.	Marketing margin	7.91	26.39	4.62	23.11	-	-
4.	Price paid by the consumer	30	100	20	100	18	100

Table.7 Correlation matrixes of cabbage in different selected markets

Markets	Bishnupur	Nambol	Imphal
Bishnupur	1		
Nambol	0.815**	1	
Imphal	0.975**	0.867**	1

** Correlation is significant at the 0.01 level (2- tailed)

Table.8 Factors affecting marketing efficiency of cabbage

S. No.	Factors	Coefficient	't' value
1.	Constant	4.534	1.092
2.	Marketing cost (x_1)	-0.278**	-3.26
3.	Marketing margin (x_2)	-0.012**	-1.966
4.	Volume of the produce handled (x_3)	0.103***	2.323
5.	Length of the market channel (No. of market intermediaries) (x_4)	-0.0305	-1.021
6.	R^2	0.563	
7.	Adjusted R^2	0.532	
8.	No. of observation (n)	100	

Note: ***, ** indicate significance at 1 percent, 5 percent level respectively

Table.9 Marketing cost and marketing margin of cauliflower (Rs/q)

Item	Channel 1	Channel 2	Channel 3
	Cost	Cost	Cost
Farm gate price	3359.3	2829.67	3753.45
Marketing Cost			
Producer	140.69 (43.17)	170.31 (73.49)	46.54 (100)
Trader	82.79 (25.40)	-	-
Wholesaler	43.34 (13.29)	-	-
Retailer	59.07 (18.12)	61.44 (26.51)	-
Total Marketing Cost	325.91	231.75	46.54
Marketing Margin			
Trader	417.20 (22.99)	-	-
Wholesaler	456.65 (25.16)	-	-
Retailer	940.92 (51.85)	938.56 (100)	-
Total Marketing Margin	1814.78	938.56	-
Consumer Price	5500	4000	3800

Table.10 Price spread of cauliflower through different market channel (Rs/kg)

S. No.	Particulars	Channel I		Channel II		Channel III	
		Rs.	%	Rs.	%	Rs.	%
1.	Net price received by the farmers	33.59	61.08	28.3	70.74	37.5	98.4
2.	Marketing cost	3.26	5.93	2.32	5.79	0.5	1.6
3.	Marketing margin	18.15	32.99	9.38	24.5	-	-
4.	Price paid by the consumer	55	100	40	100	38	100

Table.11 Correlation matrix of cauliflower in different selected markets

Markets	Bishnupur	Nambol	Imphal
Bishnupur	1		
Nambol	0.741**	1	
Imphal	0.822**	0.806**	1

** Correlation is significant at the 0.01 level (2- tailed)

Table.12 Factors affecting marketing efficiency of cauliflower

S. No.	Factors	Coefficient	't' value
1.	Constant	3.478	1.305
2.	Marketing cost (x_1)	-0.187***	-3.774
3.	Marketing margin (x_2)	-0.011*	-1.637
4.	Volume of the produce handled (x_3)	0.243***	6.084
5.	Length of the market channel (No. of market intermediaries) (x_4)	-1.362	-0.178
6.	R^2	0.688	
7.	Adjusted R^2	0.558	
8.	No. of observation (n)	100	

Note: ***, * indicate significance at 1 percent, 10 percent level respectively

Table.13 Marketing cost and Marketing margin of pea (Rs/q)

	Channel 1	Channel 2	Channel 3
Item	Cost	Cost	Cost
Farm gate price	8836.48	7805.02	9404.47
Marketing Cost			
Producer	163.52 (41.32)	194.99 (63.26)	95.53 (100)
Trader	87.70 (22.16)	-	-
Wholesaler	83.07 (20.99)	-	-
Retailer	61.39 (15.51)	113.23 (36.74)	-
Total Marketing Cost	395.69	308.21	95.53
Marketing Margin			
Trader	912.3 (32.96)	-	-
Wholesaler	916.93 (33.13)	-	-
Retailer	938.33 (33.90)	1886.76 (100)	-
Total Marketing Margin	2767.83	1886.76	-
Consumer Price	12000	10000	9500

Table.14 Price spread of pea through different marketing channel (Rs/kg)

S. No.	Particulars	Channel I		Channel II		Channel III	
		Rs.	%	Rs.	%	Rs.	%
1.	Net price received by the farmers	88.36	73.64	78.05	78.05	94.04	98.2
2.	Marketing cost	3.96	3.29	3.08	3.08	0.96	1.2
3.	Marketing margin	27.68	23.06	18.87	18.87	-	-
4.	Price paid by the consumer	120	100	100	100	95	100

Table.15 Correlation matrix of pea in different selected markets

Markets	Bishnupur	Nambol	Imphal
Bishnupur	1		
Nambol	0.927**	1	
Imphal	0.962**	0.835**	1

Table.16 Factors affecting marketing efficiency of pea

S. No.	Factors	Coefficient	't' value
1.	Constant	6.094	0.737
2.	Marketing cost (x1)	-0.868***	-6.453
3.	Marketing margin (x2)	-1.143***	-4.447
4.	Volume of the produce handled (x3)	1.552***	6.642
5.	Length of the market channel (No. of market intermediaries) (X4)	-6.164	-1.050
6.	R ²	0.510	
7.	Adjusted R ²	0.490	
8.	No. of observation (n)	100	

Note: *** indicate significance at 1 percent level respectively

Marketing cost and marketing margin vary considerably from channel to channel and were related directly to the length of the channel, *i.e.*, longer the channel, more were the marketing cost and marketing margin. Channel I (Producer - Village trader - Wholesaler - Retailer - Consumer) being the longest channel and in this channel the highest marketing cost and marketing margin per quintal, *i.e.*, Rs. 395.68 and Rs. 2767.56 respectively were observed. Channel III (Producer - Consumer) is the shortest channel accounting for lowest marketing cost, *i.e.*, Rs.95.53 per quintal. Channel 2 (Producer - Retailer - Consumer) is the next shortest channel accounting for lower marketing cost

and marketing margin, *i.e.*, Rs. 194.98 and Rs. 1886.76 per quintal respectively. Thus it can be concluded that as the length of channel increases the marketing cost and marketing margin also increases and vice-versa (Table 13).

It is clear from the table 14 that channel III can be considered to be the most efficient among the different channel for sale of pea.

The result indicates that in all the selected markets, there were information linkages about the pea prices and its arrival in other markets (Table 15).

The findings of multiple linear regression model is presented in table 16. that shows negative and significant relationship between marketing efficiency and marketing cost and marketing margin. The volume of produce had positive and significant relationship which shows that large pea farmers fetched better prices in the market. Though increasing numbers of market intermediaries had negative relationship with marketing efficiency yet this factor was not significant on the marketing efficiency of pea.

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