Evaluation of marketing pattern of major pulses in Bemetara district of Chhattisgarh, India

Abstract

The current study intends to investigate the major pulses' marketing patterns in Chhattisgarh's Bemetara area. The Bemetara and Saja blocks in the Bemetara district of the state of Chhattisgarh were the study's locations. For the study, farmers who grew pulses in the villages of Garra (30), Khati (30), Lalpur (30), and Nawrangpur (30) were questioned, as well as two villages from each block. The main conclusions of this study showed that big pulses' marketing strategies. For marginal, small, medium, large, and overall, respectively, the marketable surplus in chickpea was 6.70, 8.72, 10.11, 11.61, and 8.61 q ha-1 and 1.12, 2.17, 4.77, 12.41, and 3.60 q farm-1 of their total production (Table no. 1).In pigeon pea, it was 5.62, 8.08, 8.52, 9.97 and 7.49 q ha^{-1} and 0.61, 2.45, 2.89, 6.53, and 2.36 q $farm^{-1}$ for their total production (Table no. 2) for marginal, small, medium, large and overall, respectively. The following three widely used marketing channels for the marketing of major pulses were identified. Channel-I: Farmer → Consumer, Channel-II: Farmer → Retailer → Consumer and Channel-III: Farmer → Wholesaler → Retailer → Consumer. Channel wise total marketing cost of major pulses at sample farms, evaluated and demonstrated in the table 3 For the channel-I total marketing cost was Rs.16.63, for channel-II total marketing cost was in Rs. 34.93 and for channel-III total cost estimated as Rs. 57.96 per quintal. [14]Price spread was maximum in channel-III as Rs 268.68 followed by channel-II as Rs 136.93 and channel-I as Rs 16.63. This is due to fact that as the market chain increases price spread also increases. The price paid by consumer was maximum in channel-III as Rs 5250, followed by channel-II as Rs 5120.08 and channel-I as Rs 5000. Channel-I had the largest producer share in terms of consumer rupees (100%), followed by Channel-II (97.65%) and Channel-I (95.23%). Table No. 5 displays the marketing efficiency findings. According to the table, Channel I (300.66) had a higher efficiency than Channel II (37.39) and Channel III (19.53), in that order. According to the study, channel I was the most successful platform for marketing pulses since it was one of the more efficient marketing channels.

Keywords: Marketable surplus, Marketing channel, Marketing cost and Marketing efficiency of pulses.

Introduction

“India is the largest producer (25% of global production), consumer (27% of world consumption) and importer (14%) of pulses in the world. Pulses account for around 20 per cent of the area under food grains and contribute around 7-10 per cent of the total food grains production in the country. Pulses are grown in both Kharif and Rabi seasons, Rabi pulses contribute more than 60 per cent of the total

production". [18]"Gram is the most dominant pulse having a share of around 40 per cent in the total production followed by Tur/Arhar at 15 to 20 per cent and Urad/Black gram and Moong at around 8-10 per cent each. Per capita net availability of pulses in India, however, has reduced from 51.1 gm/day (1971) to 41.9 gm/day (2013) as against WHO recommendation of 80gm/day".[2]"Pulses are grown across the country with highest share coming first from Madhya Pradesh (26.41 per cent), second from Maharashtra (16.19 per cent), and then followed by Rajasthan (12.82 per cent), Uttar Pradesh (8.87 per cent), Andhra Pradesh (8 per cent), Karnataka (7.63 per cent) followed by Gujarat (3.84 per cent), which together accounted about 64 per cent of the total pulse production. In Chhattisgarh, pulse crops were grown in sizeable area of 1.99 lakh hectares in Kharif and 6.84 lakh hectares in Rabi season, with 4.83 lakh tonnes total production in 2022-2023. Chickpea, pigeon pea, lathyrus, black gram and green gram are the most important pulse crops of Chhattisgarh".[5]

Materials and Methods

Chhattisgarh state consists of 33 districts, out of which Bemetara district has been selected purposely. Bemetara district has four blocks, *viz.*, Berla, Bemetara, Nawagarh, and Saja. Out of these, 2 blocks were selected, which are Bemetara and Saja, because these two blocks contribute the majority of the area of total pulses. Two villages were selected randomly from each block.[3]"Lalpur and Nawarangpur from the Bemetara block and Garra and Khati from the Saja blockwere selected a total of four villages were selected for the study. Out of the list of pulse growers in the selected villages, (Lalpur 30, Nawrangpur 30, Garra 30, and Khati 30), farmers from each of the four selected villages were sampled randomly to collect the required information. In all, a sample of 120 farmers were selected for the present study". [4]

Marketable Surplus:

It is the quantity of produce left after meeting out the requirements of the producer for family consumption, cattle feed, paid as wages, used for seed purpose etc.[7][15] In mathematical equation, the marketable surplus of the produce may be expressed as:

$$MS = P - \{C + CF + W + S\}$$

Where,

MS = Marketable Surplus

P = Total Production

C = Family Consumption

CF = Quantity use for cattle feed

W = Quantity use for wage

S = Quantity kept for seed

Producer's share in the consumer's rupee:

This refers to the producer's net price expressed as percentage of the retailer's sale price of the produce.

Producers share in consumer's rupee = Price received by the farmers/Price paid by the consumers X 100[6][8]

Price spread = Consumers price – Price received by producer [10]

$$PS = C_p - P_f$$

Where,

PS = Price spread

C_p = Consumers price

P_f = Price received by farmer

Marketing efficiency (ME):

The marketing efficiency has been calculated by using the Acharya's formula

$$ME = FP / (MC + MM)$$

Where,

ME = Marketing efficiency

FP = Price received by the farmers

MC = Total marketing cost

MM = Marketing margin

Results and Discussion

Marketable surplus of major pulses:

The marketable surplus of major pulses (chickpea and pigeon pea) was observed to be very low for all the sample farms. The marketable surplus in chickpea was 6.70, 8.72, 10.11, 11.61, and 8.61 q ha^{-1} and 1.12, 2.17, 4.77, 12.41, and 3.60 q $farm^{-1}$ of their total production (Table no. 1) for marginal, small, medium, large, and overall, respectively. In pigeon pea, it was 5.62, 8.08, 8.52, 9.97 and 7.49 q ha^{-1} and 0.61, 2.45, 2.89, 6.53, and 2.36 q $farm^{-1}$ for their total production (Table no. 2) for marginal, small, medium, large and overall, respectively.[17][16] The marketable surplus was lower in the marginal group as compared to the large farms for both the pulses. The increase in marketable surplus from marginal to large farms was due to somewhat more production at large farms as well as less family consumption in comparison to marginal and small farms.

Marketing channels of major pulses at sample farmers in the study area:

In the Bemetara district, there was regulated market for pulses. That's why the study on marketing of pulses was conducted at the farmer's level. It was found that only one market functionary was engaged in the marketing of pulses in the study

area, The following three widely used marketing channels for the marketing of major pulses were identified.

Channel-I: Farmer → Consumer

Channel-II: Farmer → Retailer → Consumer

Channel-III: Farmer → Wholesaler → Retailer → Consumer

Table 1: - Marketable surplus of chickpea at sample farms (q farm^{-1})

S.N.	Particulars	Marginal	Small	Medium	Large	Overall
1	Total quantity produced	1.42(100.00)	2.64(100.00)	5.56(100.00)	17.56(100.00)	4.65(100.00)
2	Quantity retained for seed	0.08(5.63)	0.18(6.82)	0.25(4.50)	2.11(12.02)	0.40(8.56)
3	Consumption	0.22(15.49)	0.29(10.98)	0.54(9.71)	3.04(17.31)	0.66(14.17)
4	Total quantity utilized	0.3(21.13)	0.47(17.80)	0.79(14.21)	5.15(29.33)	1.06(22.72)
5	Marketable surplus	1.12(78.87)	2.17(82.20)	4.77(85.79)	12.41(70.67)	3.60(77.28)

Table 2: - Marketable surplus of pigeon pea at sample farms (q farm^{-1})

S.N.	Particulars	Marginal	Small	Medium	Large	Overall
1	Total quantity produced	0.78(100.00)	3.16(100.00)	3.66(100.00)	7.89(100.00)	2.97(100.00)
2	Quantity retained for seed	0.04(5.13)	0.2(6.33)	0.23(6.28)	0.27(3.42)	0.16(5.23)
3	Consumption	0.13(16.67)	0.51(16.14)	0.5414.75)	1.09(13.81)	0.45(15.06)
4	Total quantity utilized	0.17(21.79)	0.71(22.47)	0.77(21.04)	1.36(17.24)	0.60(20.29)
5	Marketable surplus	0.61(78.21)	2.45(77.53)	2.89(78.96)	6.53(82.76)	2.36(79.71)

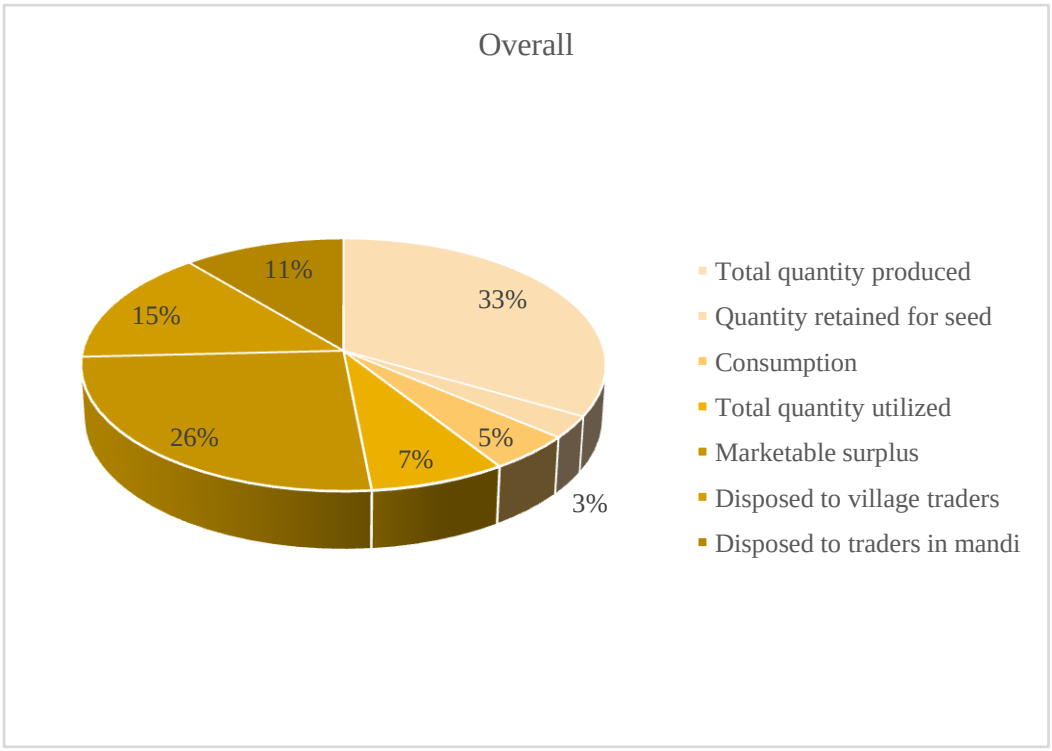

Figure no. 1: Marketable surplus of chickpea at sample farms (q ha^{-1})

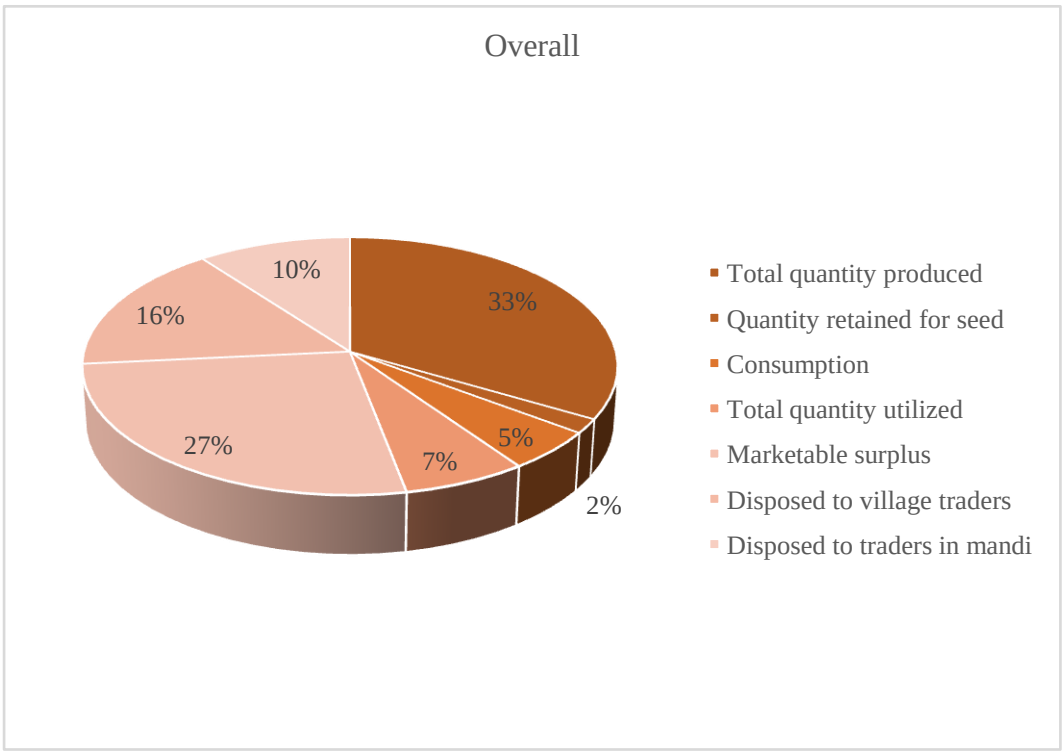

Figure no 2: Marketable surplus of pigeon pea at sample farms (q ha^{-1})

Marketing cost of different channels of major pulses in the study area:

Channel wise total marketing cost of major pulses at sample farms, evaluated and demonstrated in the table 3 For the channel-I total marketing cost was Rs.16.63, for channel-II total marketing cost was in Rs. 34.93 and for channel-III total cost estimated as Rs. 57.96 per quintal.[9]

Table 3: - Marketing cost of different channels of major pulses in the study area (Rs./q.)

S. No.	Particulars	Channel-I	Channel-II	Channel-III
A.	**Marketing cost incurred by farmers**			
i)	Labour cost	4.80	5.20	5.68
ii)	Transportation cost	8.45	8.63	9.72
iii)	Miscellaneous cost	3.38	4.25	3.28
	Total	16.63	18.08	18.68
B.	**Marketing cost incurred by wholesaler**			
i)	Labour cost	-	-	5.90
ii)	Weighing cost	-	-	0.90
iii)	Transportation cost	-	-	10.35
iv)	Miscellaneous cost	-	-	4.63
	Total			21.78
C.	**Marketing cost incurred by retailer**			
i)	Labour cost	-	5.52	5.82
ii)	Transportation cost	-	7.88	9.12
iii)	Miscellaneous cost	-	3.45	2.56
	Total		16.85	17.50
	Total cost of marketing	16.63	34.93	57.96

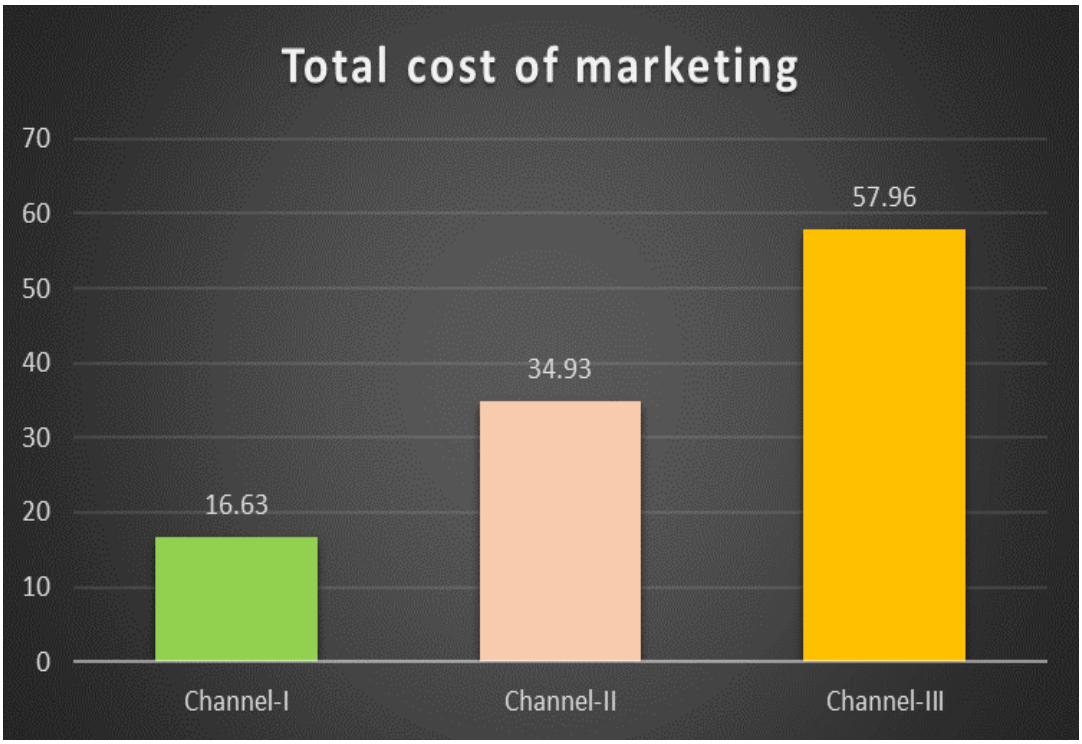

Figure no 3: - Marketing cost of different channels of major pulses

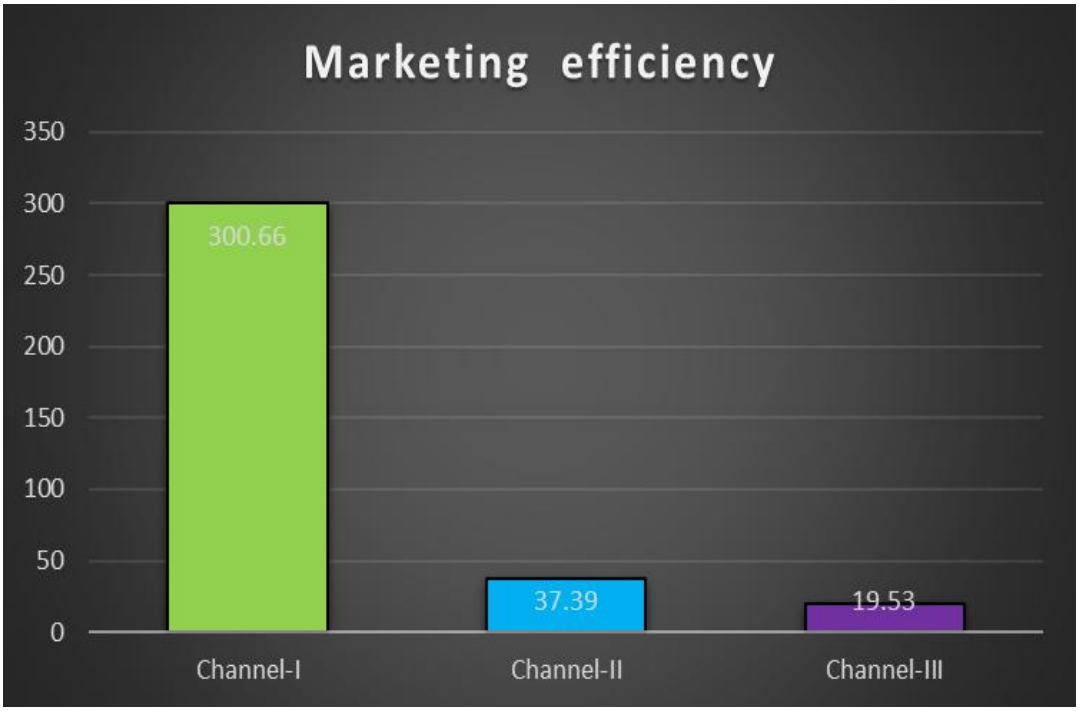

Figure no 4: - Marketing efficiency of different marketing channels of major pulses

Price spread of different channels of major pulses in study area:

The channel wise price distribution in pulses marketing has been worked out and the same detail is presented in the Table no. 4. It is observed from the table, the net price received by producer was Rs 4983.37, Rs 4981.92 and Rs 4981.32 for the channel I, II and III respectively. [12][13]Price spread wasmaximum in channel-III as Rs 268.68 followed by channel-II as Rs 136.93 and channel-I as Rs 16.63. This is due to fact that as the market chain increases price spread also increases.

Table 4: - Price spread of different channels of major pulses in study area (Rs./q.)

S. No.	Particulars	Channel-I	Channel-II	Channel-III
A.	**Farmer**			
i)	Farmer sale price	5000	5000	5000
ii)	Marketing cost	16.63	18.08	18.68
iii)	Net price received by farmer	4983.37 (99.67)	4981.92 (99.64)	4981.32 (99.63)
B.	**Wholesaler**			
i)	Wholesaler purchase price	-	-	5000
ii)	Marketing cost	-	-	21.78
iii)	Market margin	-	-	128.22
iv)	Wholesaler sale price	-	-	5150
C.	**Retailer**			
i)	Retailer purchase price	-	5000	5150
ii)	Marketing cost	-	16.85	17.50
iii)	Market margin	-	102	82.50
iv)	Retailer sale price	-	5120.08	5250
D.	**Consumer**			
i)	Price paid by consumer	5000	5120.08	5250
ii)	Price spread (Mc + Mm)	16.63	136.93	268.68
iii)	Producer's share in consumer's rupee (%)	100	97.65	95.23

The price paid by consumer was maximum in channel-III as Rs 5250, followed by channel-II as Rs 5120.08 and channel-I as Rs 5000. The producer's share in consumer's rupee was highest in channel-I (100%), followed by channel-II (97.65%) and channel-I (95.23%).

Marketing efficiency of different marketing channels of major pulses in the study area:

The Shepherd's method was followed for measuring the marketing efficiency of each channel for different grades. The results of marketing efficiency are presented in table no. 5. Table reveals that Channel- I (300.66) was moreefficient than Channel- II (37.39) and Channel- III (19.53) respectively. The study found that marketing channels more efficient thus channel-I was the most effective platform in pulses marketing.[1]

Table 5: - Marketing efficiency of different marketing channels of major pulses in the study area (Rs./q.)

S. No.	Particulars	Channel-I	Channel-II	Channel-III
1	Net price received by farmer	4983.37	4981.92	4981.32
2	Total marketing cost	16.63	34.93	57.96
3	Total marketing margin	-	102	210.72
4	Price spread (Mc + Mm)	16.63	136.93	268.68
5	Price paid by consumer	5000	5120.08	5250
6	Marketing efficiency	300.66	37.39	19.53

Conclusions

The major findings of this study revealed that the marketing pattern of major pulses. The marketable surplus in chickpea was 6.70, 8.72, 10.11, 11.61, and 8.61 q ha^{-1} and 1.12, 2.17, 4.77, 12.41, and 3.60 q $farm^{-1}$ of their total productionfor marginal, small, medium, large, and overall, respectively. In pigeon pea, it was 5.62, 8.08, 8.52, 9.97 and 7.49 q ha^{-1} and 0.61, 2.45, 2.89, 6.53, and 2.36 q $farm^{-1}$ for their total productionfor marginal, small, medium, large and overall, respectively. The channel-I total marketing cost was Rs.16.63, for channel-II total marketing cost was in Rs. 34.93 and for channel-III total cost estimated as Rs. 57.96 per quintal. Price spread was maximum in channel-III as Rs 268.68 followed by channel-II as Rs 136.93 and channel-I as Rs 16.63. The price paid by consumer was maximum in channel-III as Rs 5250, followed by channel-II as Rs 5120.08 and channel-I as Rs 5000. The producer's share in consumer's rupee was highest in channel-I (100%), followed by channel-II (97.65%) and channel-I (95.23%). The

results of marketing efficiency areChannel- I (300.66) was more efficient than Channel- II (37.39) and Channel- III (19.53) respectively.

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