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Competency of Existing Marketing System of Fertilizers

Kavita Rani[1], Dr. Gursimran Kaur[2], [3]Dr. Jagdish Karwasra

[1]Ph.D Scholar Economics, Guru Kashi University, Talwandi Sabo, Punjab

[2]Assistant Professor, Guru Kashi University, Talwandi Sabo, Punjab

[3]Professor, Haryana Agriculture University, Hisar, Haryana, India

[1]Kavitameel1983@gmail.com, [2]drgursimrankaur@gku.ac.in, [3]jck800@gmail.com

Abstract

This study critically analysis the fertiliser marketing and distribution systems in India. It examines the growth and instability of various types of fertiliser retail outlets and analyse the density and composition of these outlets to identify temporal and spatial changes. The study reveals that private sector retail outlets in India have a higher growth rate than cooperative retail outlets in different regions. The decline in the ratio of cooperative fertilizer outlets in India can be attributed to a combination of factors, including the increasing role of private sector retailers, changing farmer preferences, and the government's shift towards cash transfer programs for fertilizer subsidies.

Keywords: Fertilizers, marketing, efficiency, retail outlet, growth

Introduction

Fertilizer marketing in India is an important aspect of the country's agricultural sector, as fertilizers are essential for increasing crop yields and ensuring food security. India is one of the largest consumers of fertilizers in the world, and the fertilizer industry plays a significant role in the country's economy. In India, the marketing of fertilizers is governed by the Fertilizer Control Order (FCO), which regulates the production, distribution, and sale of fertilizers. The FCO mandates that fertilizers must be sold at government-approved prices, and prohibits the sale of adulterated or substandard fertilizers.

Fertilizers are sold through a network of dealers and retailers, who are appointed by fertilizer companies. The government also operates a network of outlets under the brand name "Kisan Seva Kendra" (KSK), which sell fertilizers at government-approved prices. Farmers can purchase fertilizers from either private dealers or KSK outlets, depending on their preference.

The government of India also provides subsidies to farmers to promote the use of fertilizers. The subsidy is paid to fertilizer companies, who then sell fertilizers to dealers and retailers at a reduced price. This helps to keep the prices of fertilizers affordable for farmers. In India, fertilizer marketing is dominated by three major types of players - public sector undertakings (PSUs), cooperatives, and private players.

The government of India regulates the prices of fertilizers by fixing the maximum retail price (MRP) of each type of fertilizer. The MRPs are fixed by the government based on the cost of production, import prices, and other factors. The government also provides subsidies to farmers to make fertilizers affordable.

Objectives of the study

1.To analysis composition and spread of fertilizer retail outlets from 1991 to 2021.
2. Analysis of temporal composition of cooperative to private outlet
3. To find out zone wise distribution share of cooperative and private fertilizer sale points

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Review of Literature

Reviewing the literature helps researchers to identify gaps in the existing knowledge and research, which can be addressed in their research study. A review of the literature can help researchers to identify potential research questions that have not yet been explored. This can help to generate new research ideas and can also help to refine the research question for the current study.

Sharma (1995) revealed that farming is largely for subsistence purposes. Land: man, ratio is very low. No commercial crop is grown in the area due to undulating terrain and absence of marketing facilities. It is suggested that increasing fertilizer usage and improving crop management would increase yields. Identification and introduction of some commercial crops suitable to the local agro-climatic situations would also help in improving the economy of the farmers.

Quader (2009) in this research paper study targeted on strategic program to contribute towards progress and development of fertilizer sector in Bangladesh. He assessed the anticipated demand of fertilizer, present production capacity and supply of fertilizer in Bangladesh. It was found that gap between fertilizer demand and supply was very wide. To increase the capacity of fertilizer, plant should be built on time, investment and implementation regarding fertilizer sector should be clear projected.

According to **Savci's (2012**) analysis, soil investigation should be carried out with caution before applying fertilizer. Once the soil has been analysed to determine its structure and chemical composition, the appropriate type of fertilizer can be selected. It is important to use the most suitable method to avoid errors, which can result in the loss of both energy and finances. Fertilization should also be done at the appropriate time.

Najibullah (2013) examined the policies related to fertiliser marketing and distribution in India, and found that they have led to a concentration of power among a few large players in the market. This has resulted in a lack of competition and choice for farmers, as well as inefficiencies in the supply chain. The authors recommend a number of policy changes to address these issues, including promoting the growth of smaller, more diverse retail outlets, implementing price controls to ensure fair pricing for farmers, and increasing transparency in the market to improve competition and efficiency.

Gulati and Banerjee (2015) analysed the Indian government's approach to agriculture, which involved increasing funding for fertilizer subsidies. The authors identified three main issues with the fertilizer subsidy in India: (1) the growing amount of subsidy allocated in the budget, (2) the extremely low price of urea leading to imbalanced use of N, P and K, and (3) the lack of investment in the domestic sector, which results in increased imports. To address these issues, the authors recommend switching to direct cash transfers to farmers based on their land size, freeing up the import of urea with zero duty, letting domestic prices be determined by market forces, and implementing a serious soil health care program.

Deshpande (2017) researched that Fertilizer sector is operating under a unique economic environment. Fertilizers are under administrative control of the Government of India. Part of cost of production/cost of imports is reimbursed to the producers/importers of fertilizers as subsidy. Subsidy in form of subsidized retail prices is passed on to the farmers through fertilizer industry. The fertilizer Industry is only conduit for payment of subsidy and not a beneficiary. Therefore, cost of production/imports are higher than retail prices. Implementation of GST in fertilizer sector, therefore, needs a special consideration. The sector does not fit into a business case, where sale price is always more than the cost of production/cost of imports. Keeping subsidy out of GST and levying GST on fertilizers at rate of 5% are welcome steps by the Government. Levying of GST on

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fertilizer subsidy would have either increased delivered cost for fertilizers to farmers or would have further increased in fertilizer subsidy.

Methodology

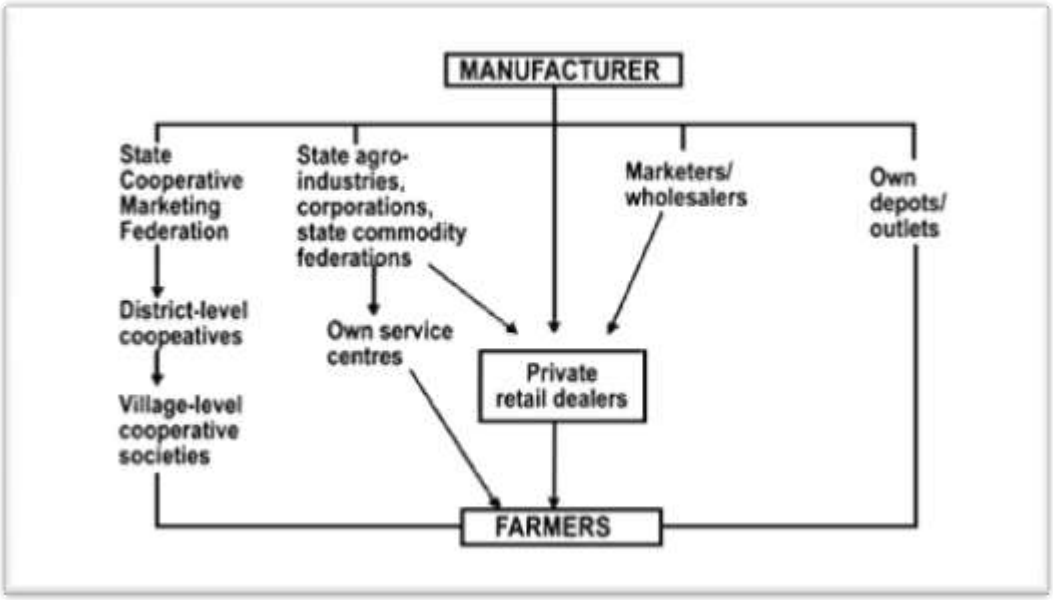
The study is based on the secondary data of marketing system of fertilizers in India. Four zone has been selected from all over India. Further two states from each zone have been taken on the basis of maximum fertilizer consumption. Spatial and temporal disparities in the retail outlets observed among the states within zone and among the four zones of India.The study period is taken from 1991-92 to 2020-21 i.e., of thirty years. Composition of cooperative and private fertilizer retail outlets of major states in India has shown during study period. The required data is collected from annual reports of Ministry of Fertilizer, annual reports of Fertilizer Association of India and Ministry of Chemical and Fertilizers.

1.1 Composition and Spread of Fertilizer retail outlets

With the advancement of agriculture production technologies crop yield depends upon the use of HYV seeds along with use of modern input like chemical fertilizer. Farmers' purchase and use of recommended chemical material depends upon their supply and availability. The timely availability of fertilizers at the required market place by the right type of agency is an important consideration in fertilizer use. This has an important marketing implication as it means that fertilizers must be made available to farmer in the form in which he wants them, at the time when he requires and at a place which it is easily accessible to him.

1.2 Efficient distribution of fertilizers through the cooperative and private retail outlets

Efficient distribution of fertilizers through the cooperative and private retail outlets in India is critical for ensuring that fertilizers reach farmers in a timely and cost-effective manner. Cooperative and private retail outlets play an important role in making fertilizers available to farmers who do not have direct access to manufacturers or wholesalers.



Considering the importance of both cooperative as well as private retail outlets in the consumption of fertilizers, attempts have been made in this paper to examine the composition and spread of different retail outlets for fertilizers in different zones of India.

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1.3 Composition and inter-state disparities among cooperative and private retail outlets

There are considerable spatial and temporal variations in the numbers of retail outlets in the country. Spatial and temporal disparities in the retail outlets observed among the states within zone and among the four zones of India. Since cooperatives and private dealers are the two main agencies involved in the retail fertilizer trade, and both have a significant impact on the consumption of fertilizers.

Table 1.3 Composition of cooperative and private fertilizer retail outlets of major states in India

(percent)

State/Time period	1990-91		2001-02		2010-11		2020-21	
	Cooperative	Private	Cooperative	Private	Cooperative	Private	Cooperative	Private
Zone	East							
Assam	8	92	8	92	7	93	5	95
Bihar	6	94	10	90	32	68	10	90
Manipur	16	84	89	11	1	99	4	96
Orissa	46	54	34	66	15	85	3	97
West Bengal	7	93	7	93	7	93	8	92
Zone	North							
Haryana	36	64	34	66	27	73	8	92
Himachal Pradesh	89	11	85	15	76	24	76	24
Jammu & Kashmir	100	-	100	-	100	-	100	-
Punjab	50	50	42	58	36	64	35	65
Uttar Pradesh	25	75	20	20	16	84	18	82
Zone	South							
Andhra Pradesh	25	75	18	82	13	87	15	85
Karnataka	33	67	22	78	22	78	27	73
Kerala	37	63	36	64	39	61	45	55
Tamil Nadu	35	65	32	68	28	72	33	60
Pondicherry	37	63	41	59	42	58	26	74
Zone	West							
Gujarat	74	26	54	46	60	40	84	16
Madhya Pradesh	47	53	61	39	42	58	37	63
Maharashtra	26	74	14	86	12	88	7	93
Rajasthan	37	63	26	74	12	88	7	93
Goa	32	68	32	68	24	76	37	63
All India	31	69	26	74	22	78	21	79

Source: Fertilizer Statistics, FAI (1990-91, 2000-011,2010-11,2020-21)

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Figure 1.3 State wise composition of cooperative and private fertilizer retail outlets in 2021

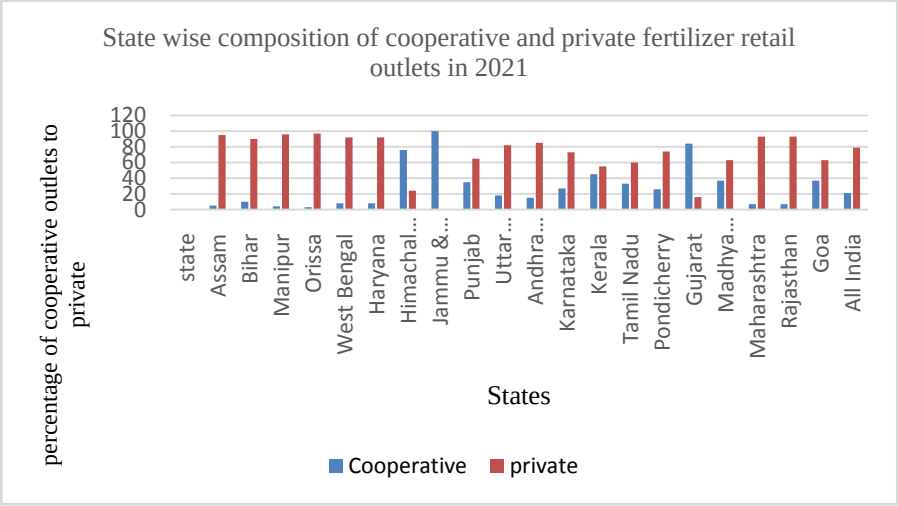

Table depicts the temporal pattern of composition and spread of retail outlets in the different zones of India from 1991 to 2021.The presented data in the table revealed that Jammu and Kashmir had 100 per cent cooperative sale point in all the four time periods 1990-91,2000-01, 2010-11 and 2020-21 while West Bengal and Bihar had the highest number of private retail outlets during the initial period in 1990-91 while in 2021, Orissa had the highest number of private retail outlets following by Manipur. A comparison for the three periods also made evident the increase in the number of retail outlets during the period also varied in the states. Since the number of total outlets reflects the number of both cooperative and private outlets, it follows that interstate disparities exist in the numbers of both cooperative and private fertilizers retail outlets. The private retail outlets gradually increased their share in market presence except states of Jammu and Kashmir, Gujarat, Himachal Pradesh where cooperative retail outlets dominated the markets for 100, 84 and 76 per cent outlets respectively. The cooperative retail outlets in Punjab were at 50 per cent mark during 1990-91. But later on, Punjab had increased proportion of private retail outlet.

If we look at all India level, distribution of private retail outlet is 79 as compared to cooperative outlets that is 21 in 2020-21

2.1 Temporal composition of cooperative to private outlets

To examine over the time changes in the composition of total retail outlets in different states, by calculating ratios of cooperative to private fertilizer retail outlets in all the four zones of India. A cooperative to private ratio greater than unity indicates that the number of cooperative outlets is more than the number of private retail outlets. A decrease in this ratio over time may indicate a decline in the number of cooperative outlets or increase in the number of private outlets or a combination of both.

The ratio of cooperative to private outlets has declined in all the states in this category indicating that the spread of private retail trade in fertilizers in these states has been relatively high. This spread of private retail trade is accompanied by relatively high order changes in irrigation and area under high yield varieties and area under major fertilizer consuming crops.

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Table 2.1Percentage share and ratio of cooperative over private fertilizer sales outlets of fertilizer in East Zone of India

Zone	East zone:								
States	Bihar			West Bengal			Average of Zone		
Years	Cooperative	Private	Ratio	Cooperative	Private	Ratio	Cooperative	Private	Ratio
1990-91	6	94	0.06	7	93	0.09	17	83	0.20
2000-01	10	90	0.11	7	93	0.09	30	70	0.43
2010-11	32	68	0.47	7	93	0.09	12	88	0.14
2020-21	10	90	0.11	8	92	0.09	6	94	0.06

Source: Fertilizer Statistics, FAI (1990-91, 2000-011,2010-11,2020-21)

The data in this table revealed that the percentage of cooperative outlet was 6 while private retail outlet were 94 percent. This table also revealed that ratio of cooperative retail outlet to private retail outlet was 0.06 in Bihar in East Zone. The ratio was increased to 0.22 in 1993-94 but again decreased to 0.11 in 2001in Bihar. It was increased to 0.47 in 2010-11and remained this till 2016-17. However, the ratio was again recorded to 0.11 in 2021 in Bihar.

In West Bengal, the ratio of cooperative retail outlet to private retail outlet was 0.09 in 1991 and reached to 0.08 in 2001. The ratio remained stable during 2001 to 2011 in 2011 in West Bengal. It showed increment in 2013-14 but almost the ratio was constant during study period i.e., at 0.08. in East zone private retail outlet were more than cooperative retail outlet. If we look at the average ratio of east zone, the ratio of cooperative retail outlet to private retail outlet was highest during 2001 and lowest during 2021.

Table 2.2 Percentage share and ratio of cooperative over private fertilizer sales outlets of fertilizer in West Zone of India

Zone	West zone:								
States	Gujarat			Maharashtra			Average of Zone		
Years	Cooperative	Private	Ratio	Cooperative	Private	Ratio	Cooperative	Private	Ratio
1990-91	74	26	2.84	26	74	0.35	43	57	0.75
2000-01	54	46	1.17	14	86	0.16	57	43	1.33
2010-11	60	40	1.5	12	88	0.14	37	63	0.59
2020-21	84	16	5.25	7	93	0.07	45	55	0.81

In the West zone percentage of cooperative to private outlet was 74 percent in 1991, 54 percent in 2001,60 percent in 2011 and 84 percent in 2021 in Gujarat. In Maharashtra, the percentage of cooperative to private retail outlet was 26 percent in 1991, 14 percent in 2001, 12

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Retrieved from https://ijeponline.com/index.php/journal

percent in 2011 and 7 percent in 2021. In West zone, overall percentage of cooperative to private outlet was 43 percent. The ratio of cooperative to private outlet was 0.75.

The data in the table showed that ratio of cooperative retail outlet to private retail outlet was 2.84 in Gujarat and 0.35 in Maharashtra in West zone. It increased in 1993-34 i.e. (3.27) in Gujarat but again declined to 1.19 in 2001 and 1.57 in 2011 in Gujarat. During Phase III, it showed a great increment in the ratio of cooperative to 5.41 in Gujarat in 2021. In Maharashtra, the ratio was 0.35 in 1991, 0.16 in 2001,0.59 in 2011 and 0.81 in 2021. The ratio was increased throughout the whole study period. This revealed that private retail outlet was distributing more fertilizer than cooperative retail outlets. The table also showed that Gujarat state showed their interest toward cooperatives while Maharashtra shown their interest towards private retail outlets.

Table 2.3 Percentage share and ratio of cooperative over private fertilizer sales outlets of fertilizer in North Zone of India

Zone	North zone:								
States	Haryana			Punjab			Average of Zone		
Years	Cooperative	Private	Ratio	Cooperative	Private	Ratio	Cooperative	Private	Ratio
1990-91	36	64	0.56	50	50	1.00	60	40	1.5
2000-01	34	66	0.52	42	58	0.72	56	44	1.27
2010-11	27	73	0.40	36	64	0.56	51	49	1.04
2020-21	8	92	0.08	35	65	0.54	47	53	0.88

Source: Fertilizer Statistics, FAI (1990-91, 2000-011,2010-11,2020-21)

This table revealed that share of cooperative outlets was less than the private retail outlets. The ratio showed that in Haryana, the ratio of cooperative retail outlet to private retail outlet was marginally low. The ratio was 0.56 in 1991,0.52 in 2001,0.40 in 2011 and 0.08 in 2021. This showed that ratio was declined during the whole study period in Haryana. In Punjab, the other selected state of north zone, percentage of cooperative to private were equal. The data in the table showed that ratio was 1.0 in 1991, 0.72 in 2001,0.56 in 2011 and 0.54 in 2021. If we make comparison of both the states, then ratio of Punjab was high than Haryana.

The data presented in table revealed that on the basis of average ratio in north zone, the ratio was found 1.5 in 1991,1.27 in 2001, 1.04 in 2011 and 0.88 in 2021. This ratio was highest among all the zones.

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Table 2.4 Percentage share and ratio of cooperative over private fertilizer sales outlets of fertilizer in South Zone of India

Zone	South zone:								
States	Andhra Pradesh			Karnataka			Average of Zone		
Years	Cooperative	Private	Ratio	Cooperative	Private	Ratio	Cooperative	Private	Ratio
1990-91	25	75	0.33	33	67	0.49	33	67	0.49
2000-01	18	82	0.22	22	78	0.28	30	70	0.43
2010-11	13	87	0.15	22	78	0.28	29	71	0.41
2020-21	15	85	0.18	23	77	0.30	30	70	0.43

Source: Fertilizer Statistics, FAI (1990-91, 2000-011,2010-11,2020-21)

In south zone, In Andhra Pradesh, the percentage of cooperative to private were 25 in 1991. The ratio of cooperative retail outlet to private retail outlet was 0.33 i 1991, 0.22 in 2001, 0.15 in 2011 and 0.18 in 2021 in Andhra Pradesh. In Karnataka, the ratio of cooperative retail outlet to private retail outlet was marginally low. The ratio was 0.49 in 1991, 0.28 in 2001, 0.28 in 2011 and 0.30 in 2021. If we compare both the states, then ratio of Karnataka was higher than Andhra Pradesh.

Table 2.5 All India shares of cooperative and private sale points and distribution of total fertilizer

(Percent)

Year	Total fertilizer sale point							
Phase-I	Cooperative	Private	Phase-II	Cooperative	Private	Phase-III	Cooperative	Private
1991-92	30	70	2001-02	24	76	2011-12	23	77
1992-93	31	69	2002-03	24	76	2012-13	22	78
1993-94	31	69	2003-04	23	77	2013-14	23	77
1994-95	31	69	2004-05	23	77	2014-15	24	76
1995-96	29	71	2005-06	21	79	2015-16	24	76
1996-97	27	73	2006-07	21	79	2016-17	22	78
1997-98	26	74	2007-08	22	78	2017-18	21	79
1998-99	26	74	2008-09	22	78	2018-19	22	78
1999-00	26	74	2009-10	22	78	2019-20	22	78
2000-01	26	74	2010-11	23	77	2020-21	22	78

Source: Fertilizer Statistics, FAI (1990-91, 2000-011,2010-11,2020-21)

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This table showed share of cooperative and private sale points and distribution of fertilizer in India. In phase-I, the share of cooperative in total fertilizer distribution was 30 percent and it reached to 26 percent till 2000-01. During phase II, private sale point was 76 in 2001 and it increased to 77 percent at all India level. In the phase III, the share by cooperative's was 22 percent and private outlet was 78 percent. Cooperative outlets were declined to 22 percent in 2020-21 to 30 percent in 1991-92.

Conclusion

The study analyses the growth and instability of various types of fertiliser retail outlets, as well as the density and composition of these outlets, to determine temporal and spatial changes. The analysis reveals that private sector retail outlets experienced higher growth rates and instability in various regions of India compared to cooperative retail outlets. In most cases, the density of private retail outlets was found to be higher than that of cooperative retail outlets. These findings suggest a shift towards greater reliance on private sector retail outlets in the fertiliser industry in India.

There are several reasons for the decline in the ratio of cooperative fertilizer outlets in India. The decline in the ratio of cooperative fertilizer outlets in India can be attributed to a combination of factors, including the increasing role of private sector retailers, changing farmer preferences, and the government's shift towards cash transfer programs for fertilizer subsidies.

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