



Advances in Research

Volume 24, Issue 5, Page 60-70, 2023; Article no.AIR.100331
ISSN: 2348-0394, NLM ID: 101666096

Institutional Arrangements to Enforce the Minimum Support Price (MSP) Policy Effectively in India: A Case Study of Wheat and Paddy Production in Punjab

Kamal Dev^{a++*}

^a *Department of Economics, Central University of Himachal Pradesh, Sapt-Sidhu Parisar-I, Dehra, District Kangra, Himachal Pradesh-177101, India.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/AIR/2023/v24i5959

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc. are available here: <https://www.sdiarticle5.com/review-history/100331>

Original Research Article

Received: 18/03/2023

Accepted: 23/05/2023

Published: 02/06/2023

ABSTRACT

The paper tries to examine the institutional arrangements to enforce the minimum support price (MSP) in India with a special reference to a highly agricultural-producing state, which is also known as the food bowl of India. The current study is based on the Punjab state which is an agriculturally rich state, here, paddy and wheat farmers suffered low losses as compared to other crop cultivators, but they are not separate from losses. These institutional arrangements to enforce the MSP policy examined by studying cost of Production, FHP, MSP, and crop procurement by the government agencies and their benefited farmers of wheat and paddy. The study calculated the percent change in over the period of 2012-13 to 2020-21 of costs data from the Directorate of Economics & Statistics (DES), and this study analysed the procurement data published by the Food

⁺⁺ *PhD Research Scholar;*

^{*}*Corresponding author: E-mail: kamal010194@gmail.com;*

Corporation of India (FCI) and the Ministry of Agriculture and Farmers Welfare, Government of India. The percentage analysis is used as a statistical tool for this research, to access the effectiveness of MSP by its institutional arrangements that enforce the MSP effectively. The institutional arrangements to enforcement the MSP of wheat and paddy is found to be effective in Punjab. The MSP seeks to guarantee fair prices for the growers that promote greater investment and output of the produce. The result of the paper revealed that within the time being the cost of production, cost of cultivation, FHP, MSP, and government procurement of wheat and paddy is increasing, whereas the number of benefited farmers has not significantly increased. The findings of this research unravel that wheat and paddy growers of Punjab are getting supported largely due to effective procurement by the government at the MSP. Overall, at the state of Punjab the procurement of wheat and paddy by the government agencies such as FCI and state agencies is satisfactory, and conclude that the institutional arrangements for wheat and paddy procurement at MSP in Punjab is effective in nature.

Keywords: MSP; FHP; FCI; cost of production; procurement; economics; Indian agriculture.

1. INTRODUCTION

India is primarily an agricultural economy; the agricultural sector of the country plays an important role in the economy. The agriculture sector is considered the most important and dominant economic activity in India. The farmers of the country face several weather risks. Besides, they are also subjected to market risk, and hardly do they profit from farming. In years when crops are damaged because of bad weather the income of the farmers is low because of productivity and low production, and in years when weather is favorable, the income is again also low because of low output prices.

In the mid sixty in 1965, the Indian government used MSP as an instrument for agricultural price policy to encounter the numerous purposes and challenges to face at that time. Since then, in realizing the numerous aims and challenges related to agricultural price policy MSP has been an effective tool to overcome the problems. The Minimum Support Price is a crucial component of India's agronomic price policy because its announcement before the planting season guarantees farmers an agricultural income in addition to sending a clear price message. The MSP aids in motivating the framers to ensure that government procures all crops at the MSP that produces enough food grains. The price policy was given credit to farmers that help to enhance domestic agricultural production [1]. The MSP supports the food security program through Public Distribution System (PDS) and other programs that pay farmers a sufficient wage, and feed food grains to buffer reserves.

MSP is a price set by the Indian government as a safeguard for farmers against a sharp decline in price during years of bountiful crop production. The minimum support prices serve as the government's guarantee price for their crop. The MSP seeks to guarantee fair prices for the growers that promote greater investment and output of the produce.

The main goal of agriculture policy is to intervene in the markets for agricultural produce to affect prices of the commodity and their variations, mainly from farm gate to retail level. The price policy is a foremost topic of discussion in both economics and politics because its objectives are to endorse fairness and growth of the country. There are challenging areas involved because the price policy affects the mainstream of people, it is continuously being studied along with its means. Additionally, it tries to ensure that everyone has access to enough and reasonably priced food grain while also realizing in a balanced manner the need for adequate food production and consumption.

Because of this, the minimum support price seeks to: -

- (i) Encourage farmers to boost production, which will improve the supply of food grains and ensure that farmers receive a fair wage and a generally stable price environment.
- (ii) Make it easier for people to buy food on a budget.
- (iii) Develop a manufacturing strategy that reflects the economy's overall needs.

Minimum Support Price (MSP) is a form of government intervention to ensure the farmers are against a steep decline in the prices of their goods and to help them prevent losses. It is the minimum price set by the government for certain agricultural products. The farmers are paid a pre-announced price for their crops. Institutional arrangements to enforce the MSP are the mechanisms and agencies that are involved in implementing the MSP policy and ensuring that the farmers get an assured price for their produce. Some of the institutional arrangements to enforce the MSP are the followings: -

- The Commission for Agricultural Costs and Prices (CACP): This is an advisory body that recommends the MSP for various crops based on several aspects such as cost of production, demand and supply, market prices, etc. The CACP submits its recommendations to the government, which then takes the final decision on fixing the MSP.
- The Food Corporation of India (FCI): This is a public sector undertaking that purchases food grains from the farmers at the MSP and preserves buffer stocks for food security and public distribution. The FCI also sells food grains to state governments and other agencies at subsidized prices under various schemes.
- The National Agricultural Cooperative Marketing Federation of India Ltd (NAFED): This is a cooperative federation that procures oilseeds, pulses, cotton, and other crops from the farmers at the MSP and sells them in domestic and international markets. NAFED also provides marketing support and extension services to the farmers.
- The State Governments: The state governments also play a role in enforcing the MSP by providing infrastructure, logistics, storage, and quality control facilities for procurement. They also coordinate with the central agencies and monitor the implementation of the MSP policy.

These are some of the institutional arrangements to enforce the MSP in India. However, there are some challenges and limitations in ensuring that all the farmers benefit from the MSP policy. Some of these challenges are: - (i) Lack of awareness among farmers about the MSP and procurement process, (ii) Inadequate coverage of crops and regions under MSP, (iii) Delayed

payments and procurement by government agencies, (iv) High transportation and transaction costs for farmers, (v) Distortion of market prices and incentives due to MSP, and (vi) Fiscal burden on the government due to high subsidies.

1.1 The Determination of MSP

The CACP determines and suggests the MSP. The CACP considers an extensive view of the overall economic structure of an individual item or set of commodities when calculating the MSP. The cost of production, variations in input prices, market price trends, demand and supply, price parity of inter-crop, impact on the general price level, global price condition, parity between prices paid and received by the farmers, and implications for subsidies are additional factors. The Commission uses micro-level data as well as masses at the district, state, and nationwide levels. To evaluate the MSP, a range of supply-related data is necessary such as area, yield, production, imports, exports, domestic availability, government agencies, cost of marketing, storage cost, transportation cost, marketing amenities, taxes, and profit margins maintained by market representatives; etc.

The Commission is abetted in reaching the MSP by many Departments and Ministries. An extensive study of the scheme, cost of production, run by the Directorate of Economics and Statistics under the Ministry of Agriculture and Farmers Welfare, Government of India, provides the directive with the evaluation of the cost of cultivation and cost of production, an essential input for developing the commendation of MSP. These projections account for the production factors and contain all real cash and kind expenditures made by the farmer for production, as well as rental paid for rented land, the imputed cost of family labour, interest value of owned capital assets excluding land, the rental cost of owned land (net of land revenue), depreciation of farmstead equipment, and other incidentals are included and take an active role of determination of the MSP. The guaranteed price for the crops improves the production and productivity of the crop which motivate farmers to produce more which increases the growth as well as export of the products in which terms of trade also take an active role to determine the price level. The expectation, since 1991 reform of the shift in the terms of trade in favour of agriculture will improve agriculture exports, increase agriculture growth and reduce poverty [2]. The extent of spatial integration of better

infrastructure amenities and market reforms in the marketing system would strengthen market integration and improve effectiveness in the supply chains [3]. The economic liberalization ensures a favourable shift in the terms of trade in the Indian agriculture sector that cultivation improvements on land improve agriculture productivity and agricultural growth. Roy, [4] expectations to the contrary, and found that the reform period did not markedly improve in terms of trade for agriculture in India, they deteriorated in certain stages during the post-reform period.

Therefore, there is a need to improve and reform the institutional arrangements to enforce the MSP more efficiently and effectively. Punjab is an agriculturally rich state, Paddy and wheat farmers suffered low losses as compared to other crop cultivators, but they are not separate from losses. This paper examines the institutional arrangements to enforce the minimum support in India with a special reference to a highly agricultural-producing state, which is also known as the food bowl of India. This is a cereal surplus state in India and the MSP policy is highly effective in this state [5]. The non-too-remunerative minimum support prices and the lacklustre procurement operations, when market prices dwindle, contribute to farmers' suicides due to the inability to repay the debt. Sidhu & Singh, [6] in their study has revealed that debt on Punjab farmers on average was Rs. 1.71 lakhs per holding. Punjab state is well known for monocropping of wheat and paddy, this is also due to the reason of state government policy that the case of electricity power subsidy for tube well irrigation in Punjab showed that "the larger getting larger subsidies" and "the better placed getting better subsidy" [7,8]. The prices realized by small and marginal farmers are particularly low because they cannot and do not take their produce to procurement canters for, they have little surplus to sell and high transportation costs. Traders take advantage of the incapacity of the farmers and purchase crop at the farm gate and offer low prices for their produces. Thus, the procurement operations at MSPs even where they exist do not benefit the farmers, poor infrastructure in rural areas such as road connectivity and the absence of inadequate godowns facilities also hamper farmers in general from securing remunerative prices for their produce. Institutional enforcement of MSP is done through various measures such as procurement by government agencies, direct payment to farmers, and penalties for traders who purchase crops below MSP. Even at this

scale, massive institutional structures are required for procurement. If there are no procurement activities to support the newly fixed MSPs, they will stay hypothetical and will not help small farmers [9].

Therefore, this study aimed to know the institutional arrangements to enforce the MSP policy effectively in India through the relative changes in MSP and costs and the share of crop procurement by the government procurement institutions, with a case study of wheat and paddy in Punjab, because Punjab is a cereal producing state of the country and here the dominant of monoculture of wheat and paddy. This study would be helpful to the policymakers to understand the effectiveness of the MSP policy over the years and do the needful to enhance the performance of the price policy.

2. MATERIALS AND METHODS

This research is purely based on secondary data and information, which was assembled from several secondary sources such as the data of cost of cultivation, cost of production, farm harvest prices (FHP), and minimum support prices (MSPs) of wheat and paddy collected from the official website of the Directorate of Economics and Statistics, and Commission for Agricultural Cost & Prices, Ministry of Agricultural and Farmer's Welfare under the Government of India, and the statistics of government procurement, and benefited farmers numbers was poised from the Food Corporation of India (FCI), and various pieces of information are gathered from previous research articles, newspapers, and so on. The collected data and information were meticulously checked and assembled in authentic information, which was analyzed and inspected by statistical tools like percentages etc. to generate a fruitful outcome for the study. The percentage and average analysis are used as a statistical tool for this research, over the period percentage change is calculated to access the effectiveness of MSP by its institutional arrangements that enforce the MSP effectively.

This research examined the cost and procurement data to get a better idea of how the MSP policy is effective at the farmer's level. The fundamental claim is that if farmers sell their crops to government procurement agencies rather than to nearby private procurement agencies or private traders, the price strategy will be highly effective. It's because, aside from the

government institutions, other institutions provide services at a reasonable cost set by the market and typically below MSP. Hence, sometimes even public procurement agencies also procure crops at a price less than the MSP [10].

3. RESULTS AND DISCUSSION

There are some weights in the argument of farmer groups that the increase in MSP over the years has been commensurate with an increase in the cost of cultivation for almost all crops. Consider these figures about composite Punjab, one of the most important government procurement states in the country. This paper examines the cost of cultivation, production value, MSP, and farm harvest prices of wheat and paddy cultivation data from the marketing year 2012-13 onwards.

The Table 1 shows the relationship between the cost of production, cost of cultivation, minimum support price, and farm harvest prices of the two most cultivable crops wheat and paddy in Punjab. The data from between the years 2012-13 to 2020-21, the cost of cultivation per hectare of wheat as defined by the cost A2 increased by 138.83 percent, whereas the revised C2 cost increased by 145.91 percent. On the other hand, the cost of production defined as rupees per quintal is increased by 134.83 and 141.75 of cost A2 and revised C2 cost respectively. In the case of paddy, Table 2 shows that the cost of cultivation as A2 and revised C2 cost is increase 144.62 percent and 151.74 percent respectively. The cost of production in paddy is also shown in Table 2 is an increase of 137.29 percent A2 cost and revised C2 is 144.12 percent. Thus, the table reveals that the cost of cultivation and the cost of production of paddy cultivation in Punjab is increasing according to the period. During the corresponding period, the increase in the minimum support price of wheat rupees per quintal was merely 146.30 percent, which clearly shows the increase in MSP is greater than the increases in the costs. The MSP of paddy examines in the Table 2 and reveals that the MSP of paddy is increased by 149.44 percent which shows that the growth of increasing in the MSP of paddy is more than the increase in the MSP of wheat. Table 1 also shows the MSP as a percent of the cost of cultivation of wheat as A2 and C2 revised cost, and the cost of production of A2 and revised C2 cost since the year 2012-13 to 2020-21 and revealed that MSP is increased more as a percent of cost A2 compare to revised C2 cost.

In the case of paddy, the increase in MSP as a percentage of the cost of cultivation and cost of production as A2 and revised C2 cost.

The MSP is an effective tool to improve the income level and welfare of the farmers, so it is necessary to enforce the MSP scheme effectively through an institutional arrangement. Farm harvest price (FHP) is important to determine the effectiveness of the MSP policy, the Table 1 and Table 2 reveal the relationship between FHP and MSP of wheat and paddy cultivation respectively in Punjab. Table 1 for wheat illustrates the FHP of 2012-13 is 1601 which is 118.59 percent of MSP in the same year, whereas in the year 2019-20 display the FHP is 1851 and it is 96.16 percent of the MSP. However, the Table 2 for Paddy illustrates the FHP in 2012-13 is 1280 Rs. / Quintal, which is 102.40 percent of MSP, FHP was increasing during that time, and in the year 2019-20 the FHP of paddy is Rs. 1835 which was 101.10 percent of the MSP. Therefore, the result shows that according to time the cost of the production/cultivation, MSP, and FHP of wheat and paddy is increasing respectively. The gap between FHPs and MSPs is narrowed down in recent years, with MSP as a market-leading price and being contributory in rising market prices, thus averting a fall [11] and suggest five important factors that add vigour to a successful implementation of the MSP policy in Punjab, these factors include – (i) satisfactorily bulky marketable surplus of wheat and paddy, (ii) well-tuned procurement machinery with a well-spread network of market infrastructure, (iii) procedure of politicization, (iv) historic contribution of public distribution surplus, and (v) significant awareness of the MSP scheme among the farmers. The adverse impact on MSP and production costs as well as the torrential and erratic rains that are hallmarks of climate change are also unknown from these figures. Farmers are frequently forced to sow seeds twice and deal with many kinds of pests, which results in an excessive cost of cultivation. One is unsure if the estimates of cultivation costs established by the commission for agricultural costs & prices account for these undesirable situations, which are now frequent. The unfavourable conditions of weather fall farmers into drought and high cost of cultivation and higher cost of production. However, due to unfavourable climate farmers often wear high cost to produce and harvest their crops.

Therefore, the Indian government intervenes in the market through the Minimum Support Price

(MSP) to protect farmers from a sudden drop in farm prices and to protect farmers from occurring higher costs. The Central Government announces the MSP for some specific crops before the sowing season based on the recommendations of the Commission for Agricultural Costs and Prices (CACP), kept in mind to safeguard farmers from glut against a sharp decline in price during years of bumper crop production. The minimum support prices serve as the government's guarantee price for their produce.

The Table 3, reveals wheat and rice/paddy procurement for the central pool and also shows the procurement share from the Punjab state. Table 3 reveals that Punjab secures a higher position in the share of the central food pool, the state has an active and effective procurement agency that procures a large amount of wheat and rice for the central food pool. There are mainly three types of procurement agencies which are FCI, state procurement agencies, and private agencies also called private traders, aartiyaas, and middlemen. The data from the Table 3 divulges that in the year 2012-13, total wheat procurement in India was 382.15 Lakh Metric Tonnes (LMT) which was 128.36 Lakh Metric Tonnes procure in Punjab, the time in the year 2022-23 the procurement of wheat by the government in India was 187.92 LMT in which 96.45 LMT procure in Punjab. Punjab is the top contributor in the central pool of wheat procurement, the Food Corporation of India has so far purchased more than 46% of its wheat from Punjab [12]. The percentage of procurement over time (2012-13 to 2022-23) is 49.17% in wheat procurement in India and 75.14% in Punjab, it is the same in the case of rice procurement, the total procurement of rice in India in the year 2012-13 was 340.44 LMT in which 85.58 LMT rice procure from Punjab, as time being in 2022-23 total rice procurement in India was 499.78 LMT and 122.01 LMT rice procure from Punjab. Thus, the percentage of procurement of rice over time (2012-13 to 2022-23) is 146.80 % in India and 142.57 % in Punjab. Therefore, we can say that Punjab occupies an important role in the central food pool and the government procures most of the crop at the rate of MSP from the Punjab state, as [13] claim that Punjab provides nearly 30 million tons of food grains every year for the central pool.

From the above Table 4, which shows agency-wise government procurement of wheat and rice in Punjab, the data of the table reveals that the

government procurement is done by the Food Corporation of India (FCI), and state procurement agencies. The procurement of cereal crops such as wheat and paddy from Punjab state procurement agencies as well as FCI takes an important role in the procurement of farmers' produce at the MSP. Punjab is the largest number of APMC and FCI market which is responsible for government procurement at MSP. The study revealed that on average from the year 2013-14 to 2022-23, 15.19 lakh metric tonnes (LMT) of wheat was procured by the FCI, and 101.23 LMT was procured by the state agencies, in addition, 116.42 LMT of wheat was procured by government from the farmers at MSP. Over the time from 2013-14 to 2022-23, FCI increases its procurement by 32.04 %, whereas state agencies' procurement increased by 100.75 %, as a whole 88.53 % increase over time. In the case of paddy procurement an average of ten-year FCI procured 3.67 LMT, and state agencies 158.54 LMT, which is 162.21 LMT paddy procured by the central and state government agencies. Over the time (2013-14 to 2022-23) paddy procurement by the FCI increased from 43.01 % and 154.83 % by the state agencies, and it was overall increased by 150.53 % by both agencies. The FCI and state procurement instructions are the two main government procurement agencies that procure the crop at the MSP, and in Punjab state, the FCI procures wheat and paddy at the MSP but its share in total procurement declined over time, [14] found similar results. The result of the study reveals that the state procurement agencies are playing an effective and vital role in the procurement of wheat and paddy, it is the main farming crops in Punjab, and effective procurement at the MSP ultimately welfare the farmers of the state. An in-depth analysis of procurement agency wise in Punjab was conducted for wheat and paddy and found that the crops offered the highest protection by the state findings of the research reveal that the MSP for wheat and paddy in Punjab is found to be effective, to study the effectiveness of MSP in India, shreds of evidence from all Indian states, [15] also found the MSP policy is to be effective in Punjab state.

The number of farmers who benefited from the MSP from the marketing season 2015-16 to 2022-23 is displayed in Table 5, the table shows the number of benefited farmers and reveals that in the kharif marketing season (KMS) number of benefited farmers trend has to decrease and in the year 2015-16 maximum farmers benefited to

Table 1. Relationship between cost of cultivation, cost of production, MSP, and farm harvest price of wheat cultivation in Punjab

Year	Cost of Cultivation (Rs. / Hectare)		Cost of Production (Rs. / Quantal)		MSP (Rs. / Quantal)	MSP as % of Cost of Cultivation		MSP as % of Cost of Production		FHP (Rs. / Quantal)	FHP as % of MSP
	A2	C2 Revised	A2	C2 Revised		A2	C2 Revised	A2	C2 Revised		
2012-13	24266.80	49518.80	480.91	981.21	1350	5.56	2.73	280.72	137.59	1601.00	118.59
2013-14	27459.00	55202.90	482.81	970.47	1400	5.10	2.54	289.97	144.26	1357.00	96.93
2014-15	25036.60	53036.70	515.00	1091.10	1450	5.79	2.73	281.55	132.89	1410.00	97.24
2015-16	26723.90	57581.60	507.87	1094.80	1525	5.71	2.65	300.27	139.29	1667.00	109.31
2016-17	27984.00	61356.50	505.84	1109.50	1625	5.81	2.65	321.25	146.46	1561.00	96.06
2017-18	29547.20	65881.40	525.99	1172.90	1735	5.87	2.63	329.85	147.93	1640.00	94.52
2018-19	34179.30	71240.60	577.14	1248.60	1840	5.38	2.58	318.81	147.36	1753.00	95.27
2019-20	34983.90	72236.20	651.94	1344.80	1925	5.50	2.66	295.27	143.14	1851.00	96.16
2020-21	33690.00	72250.50	648.39	1390.90	1975	5.86	2.73	304.60	141.99	-	-
% Increase in 2020-21 over 2012- 13	138.83	145.91	134.83	141.75	146.30					115.62	

Source: Directorate of Economics and Statistics, Department of Agriculture & Farmers Welfare, Govt. of India. www.eands.dacnet.nic [18]

Table 2. Relationship between Cost of Cultivation, Cost of Production, MSP, and Farm Harvest Price of Paddy cultivation in Punjab

Year	Cost of cultivation (Rs. / Hectare)		Cost of production (Rs. / Quantal)		MSP (Rs. / Quantal)	MSP as % of cost of cultivation		MSP as % of cost of production		FHP (Rs. / Quantal)	FHP as % of MSP
	A2	C2	A2	C2		A2	C2	A2	C2		
		Revised		Revised			Revised		Revised		
2012-13	31948.47	64811.36	466.42	945.73	1250.00	3.91	1.93	268.00	132.17	1280.00	102.40
2013-14	34340.41	68382.86	525.40	1043.27	1310.00	3.81	1.92	249.33	125.57	1103.00	84.20
2014-15	33767.86	73254.48	503.49	1091.75	1360.00	4.03	1.86	270.11	124.57	1400.00	102.94
2015-16	34618.59	74621.70	493.04	1061.66	1410.00	4.07	1.89	285.98	132.81	-	0.00
2016-17	35535.52	76106.57	510.34	1092.01	1470.00	4.14	1.93	288.04	134.61	1510.00	102.72
2017-18	35850.89	81377.82	476.80	1082.54	1550.00	4.32	1.90	325.08	143.18	1596.00	102.97
2018-19	42075.70	84878.21	617.72	1246.78	1750.00	4.16	2.06	283.30	140.36	1769.00	101.09
2019-20	45901.37	90001.75	686.06	1345.96	1815.00	3.95	2.02	264.55	134.85	1835.00	101.10
2020-21	46203.96	98342.82	640.35	1363.01	1868.00	4.04	1.90	291.72	137.05	-	-
%	144.62	151.74	137.29	144.12	149.44					143.36	
Increase in 2020- 21 over 2012-13											

Source: Directorate of Economic and Statistics, Department of Agriculture & Farmers Welfare, Govt. of India. www.eands.dacnet.nic [18]

Table 3. Wheat and rice/paddy procurement for central pool and share of procurement from Punjab

(Fig. in LMT)

Year	Total Wheat Procurement in India	Wheat Procurement from Punjab	Total Rice/Paddy Procurement in India	Rice/Paddy Procurement from Punjab
2012-13	382.15	128.36	340.44	85.58
2013-14	250.72	108.95	318.45	81.06
2014-15	281.31	116.44	320.4	77.86
2015-16	280.88	103.44	342.18	93.5
2016-17	229.61	106.49	381.06	110.52
2017-18	308.24	117.06	381.74	118.39
2018-19	357.95	126.92	443.99	113.34
2019-20	341.32	129.12	518.26	108.76
2020-21	389.92	127.14	602.45	135.89
2021-22	433.44	132.22	575.88	125.48
2022-23	187.92	96.45	499.78	122.01
% Increase over time	49.17	75.14	146.80	142.57

Source: Food Corporation of India. www.fci.gov.in/ [19]**Table 4. Agency-wise government procurement of wheat and paddy in Punjab**
(Fig. in LMT)

Year	Wheat				Paddy/Rice			
	FCI	State agencies	Total	FCI share (%)	FCI	State agencies	Total	FCI share (%)
2013-14	19.38	89.57	108.95	17.79	4.65	116.33	120.98	3.84
2014-15	18.41	98.03	116.44	15.81	2.88	113.33	116.21	2.48
2015-16	18.47	84.97	103.44	17.86	6.54	133.02	139.56	4.69
2016-17	17.48	89.01	106.49	16.41	7.66	157.3	164.96	4.64
2017-18	14.53	102.53	117.06	12.41	3.81	172.89	176.7	2.16
2018-19	15.31	111.61	126.92	12.06	2.52	166.64	169.16	1.49
2019-20	15.72	113.4	129.12	12.17	2.24	160.09	162.33	1.38
2020-21	14.2	112.94	127.14	11.17	2.69	200.13	202.82	1.33
2021-22	12.21	120.01	132.22	9.23	1.69	185.6	187.29	0.90
2022-23	6.21	90.24	96.45	6.44	2.00	180.11	182.11	1.10
Average	15.19	101.23	116.42	13.05	3.67	158.54	162.21	2.26
% Increase over time	32.04	100.75	88.53	36.20	43.01	154.83	150.53	28.65

Source: Food Corporation of India. www.fci.gov.in/ [19]**Table 5. Number of wheat and paddy farmers who benefited from the MSP, marketing season wise from 2015-16 to 2022-23**

Year	Number of benefited farmers	
	Kharif Marketing Season (KMS)	Rabi Marketing Season (RMS)
2015-16	1206216	-
2016-17	940560	834655
2017-18	1142621	843446
2018-19	1143713	897905
2019-20	1125238	830528
2020-21	1057674	1049982
2021-22	933263	887521
2022-23	903942*	793449

*KMS 2022-23 is under progress, data as on 30.04.2023

Source: Food Corporation of India. www.fci.gov.in/ [19]

the government procurement whereas in the rabi marketing season (RMS) the maximum number of farmers benefited in the year 2020-21. The trend in beneficiary farmers of Punjab has found an increasing trend in RMS but in the KMS the trend has been negative, therefore, it is also a major concern to the policymakers. Information failure is one of the foremost roots of market failure [16]. The majority of the farmers of Punjab are aware of the MSP and they have better information about the market, therefore, there is the minimum chance to market failure thus the MSP policy is to be effective in the state.

Punjab has the largest Agricultural Produce Market Committees (APMCs) markets in the country, at which government procures the agricultural product. The administration of MSP is best organized in this state and it is dominant in the wheat procurement from the binging of the MSP scheme and paddy procurement in the recent past. The minimum support price is an essential tool to improve the farmers' income and welfare, and it is possible when the MSP is implemented effectively and government procures more and more products for the farmers. Effectively procurement by government agencies is responsible to increase the farmers' benefits as well as their welfare.

4. CONCLUSION

The Punjab state is one of the largest wheat and paddy producer state in the country. It is also one of the major contributors to the food central pool. The government procures a large number of food grains at the MSPs for the PDS scheme from this state. The MSP is understood to be the price at which the governments buy agricultural produce. However, that is not the intent of the MSP, which is aimed to ensure that the market price of agricultural produce does not fall below a minimum price. It implies that the Government would enter the market if the price of agricultural produce is lower than the MSP to protect farmers' interests. This paper has examined the institutional arrangements that enforce the MSP in India with a case study of wheat and paddy crops in Punjab state. There are several socioeconomic characteristics of the farmers such as age, gender, and education level also significantly influence the decision of marketing the crops [17]. This study has shown that institutional arrangements take an active and essential role to enforce the MSP policy in India, throughout the period the MSP and value of production of crops have increased significantly

but the government procurement by the FCI has not increased over time, it shows a decreasing trend.

When MSPs are increased as intended, the government has to commit more funds to pay the differential amount to the procurement agencies, to engage support staff requirement has to handle increased procurement to hire storage capacity to move procured output to pay interest charges on funds committed to procuring output, etc. More generally, institutional arrangements on a gigantic scale are needed to handle procurement operations and unless the newly fixed MSPs are not backed up by procurement operations, they would remain notional and would not benefit the farmer. It is doubtful whether the government could handle procurement operations of a scale unheard of before.

COMPETING INTERESTS

The author has declared that no competing interests exist.

REFERENCES

1. Reddy SS, Ram PR, Sastry TN, Devi IB. Agricultural economics. Oxford & IBH Publishing Company Private Limited; 2018.
2. Ahluwalia MS. India's economic reforms: Achievements and next steps. Asian Economic Policy Review. 2019; 14:46-62. DOI:<https://doi.org/10.1111/aep.12239>
3. Ghosh M. Institutional reforms and spatial efficiency in agricultural supply chains in India. Journal of Asian and African Studies; 2022. DOI:<https://doi.org/10.1177/00219096221143128>
4. De Roy S. Economic reforms and agricultural growth in India. Economic and Political Weekly. 2017;52(9):67-72. Available:<http://www.jstor.org/stable/26696027>
5. Aditya KS, Subash SP, Praveen KV, Nithyashree ML, Bhuvana N, Sharma A. Awareness about minimum support price and its impact on diversification decisions of farmers in India. Asia and the Pacific Policy Studies. 2017;4(3):514-526. DOI:<https://doi.org/10.1002/app5.197>
6. Sidhu MS, Singh G. A study on staggered public procurement of wheat in Punjab. Agricultural Economics Research Review. 2010;23 (July-December, 2010):325-334.

7. Jain V. Political economy of electricity subsidy - evidence from Punjab. *Economic & Political Weekly*. 2006;41(38):4072-80.
8. Sidhu RS, Vatta K, Lal U. Climate change impact and management strategies for sustainable water-energy-agriculture outcomes in Punjab. *Indian Journal of Agricultural Economics*. 2011;66(3):328-339.
9. Mandala, Srinivasa Reddy. Institutional Arrangements to Enforce Minimum Support Prices: A Case of Paddy and Cotton in Andhra Pradesh. *The Economic Journal*, special issue (Accelerating Agricultural Growth). 2018;307-309.
10. Das R. Minimum support price in India: what determines farmers' access?. *Agricultural Economics Research Review*. 2020;33(1):61-69.
11. Deshpande RS, Kumar BS. Price policy and minimum support prices in a changing agricultural economy. *Reforming Indian Agriculture. Towards Employment Generation and Poverty Reduction*. 2008;119-60.
12. Prakash, Karam. 46%, Punjab top contributor to wheat pool. *The Tribune*, New Delhi; 14 May 2023. Available:<https://www.tribuneindia.com/news/punjab/46-punjab-top-contributor-to-wheat-pool>.
13. Kumar, Suresh. Enforcing the minimum support price (MSP). Former chief principal secretary to the chief minister, Punjab at Government of Punjab, Chandigarh, India; 2021. Available:<https://www.linkedin.com/pulse/enforcing-minimum-support-price-msp-suresh-kumar/>
14. Khowajazada KH, Sekhon MK, Bhardwaj S. Growth, impact and effectiveness of administered prices for major crops in Punjab. *Journal of Agricultural Development and Policy*. 2022;32(1):117-124.
15. Kumar Basantaray A. Is minimum support price effective in India? Evidence from state-wise paddy procurement. *Asian Journal of Agricultural Extension, Economics & Sociology*. 2023;41(1):53-65.
16. Raj N. Information asymmetry and market failure. *International Journal of Food and Nutritional Sciences (IJFANS)*. 2022;11(1):1020-1037. e-ISSN 2320 – 7876. Available:www.ijfans.org
17. Gupta RK, Kumar V, Singh PK, Danish M, Dehariya N. Impact of minimum support price on agricultural production in Western India. *International Journal of Current Microbiology and Applied Sciences*. 2020;9(6):2291-2303.
18. Directorate of Economics and Statistics, Department of Agriculture & Farmers Welfare, Govt. of India. Available:www.eands.dacnet.nic.
19. Food Corporation of India (FCI). Available:<https://fci.gov.in/>

© 2023 Dev; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/100331>