

An Analytical Study of the Minimum Support Price (MSP) Scheme and its Impact on Farmers: A Study of Aurangabad District

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Abstract: *An integral part of the Government of India's intervention in the lives of farmers, Minimum Support Price (MSP) is one such policy which caters to farmers in the event of price fluctuations and ensures remunerative returns for their produce. The current study has the intention of exploring the implementation of MSP in Aurangabad District, Maharashtra and determining the effect of the scheme on Aurangabad's farmer Members. The key objective is to become aware of farmers' awareness and participation from the procurement system, the efficiency farmers in the MSP procurement system, farmers' likely challenges that may exist during procurement. The information for the study was gained from primary data sources, such as the structured questionnaire from the beneficiary farmers and secondary sources including Government Reports, published work and Agricultural Statistics. Descriptive and inferential statistical techniques are used to analyse the data and check the relationship between MSP implementation and the socio-economic condition of the farmers. The improvement seen in the results indicate that the MSP policy has led to positive changes in farmers' livelihood security, reduction in dependence on the intermediaries and increased farmers' trust in the government procurement system. Yet other challenges, such as delayed procurement, undertrained procurement centres, less awareness, excessive bureaucracy and logistical problems are still affecting the success of the scheme. Based on the study, it is recommended that the procurement infrastructure should be strengthened, farmer awareness initiatives should be promoted, payments to them should be made in time and greater efforts should be made to increase market access to boost the efficiency of MSP scheme and promote sustainable agriculture development and betterment of farmers' livelihoods in Aurangabad District.*

Keywords: Minimum Support Price (MSP), Agricultural Produce, Government Procurement, Farmers' Income, Agricultural Marketing, Price Support Policy, Beneficiary Farmers, Farm Income Stability, Agricultural Development.

I. INTRODUCTION

For centuries agriculture has remained the basis of the Indian economy and is providing jobs for more than half of the country's workforce, and food security and economic development is largely headed by agricultural pursuits. However, even with the rapid industrialization and growth of services sector the agriculture is still playing important role and filling socio-economic fabric in rural India. However, Indian farmers have to face up many uncertainties like unstable climatic conditions, volatile market prices, poor marketing facilities, imperfect markets and small farmer holdings. Commonly, such issues result in an unstable farm income, hence agriculture becomes a risky business. The Government of India had brought in an agricultural pricing policy, Minimum Support Price (MSP) as a measure to safeguard the farmers from distress sale and provide remunerative price to the farmers' produce. Every year, the government of India comes out with the announcements of MSPs for different agricultural commodities before sowing

time, on the basis of the recommendations made by the Commission for Agricultural Costs and Prices (CACP). MSP is essentially a mechanism to provide farmers insurance on the fixed price per acre of the production so that growing crops is an incentive, strengthening food security, calming market rates and improving the farmer's economy. The other advantage which farmers can avail is procurement of their produce at announced MSP when market price problem in state countries has sunk below the announced MSP with the help of buying agents such as Food Corporation of India (FCI), National Agricultural Cooperative Marketing Federation (NAFED), Cotton Corporation of India (CCI) and state procurement agencies. MSP mechanism has played a crucial role in advancing the efforts of procurement of food grains, pulses, oilseeds and Commercial crops production for adequate procurement under Public Distribution System (PDS) and National Food Security Programmes.

Since its launch, the policy of Minimum Support Price in Indian Agriculture has been one of the most discussed measures of interest in India for the past few years. Supporters say it helps provide income security, promotes investment in farming and diminishes market uncertainties, but detractors say it has some benefits mostly for farmers in certain areas and just a few crops. Besides, some studies highlighted the problems of the infrastructure of procurement, delays payment, farmer's lack of awareness, procedural problems, the small number of procurement centres, transportation problems, and small and marginal farmers who are not able to access the procurement centres. Hence, the true impact of MSP scheme in various states and districts has been identified to be variable as it is dependent on the efficiency of implementation, support from the institutions involved, crop patterns and awareness among the farmers regarding the MSP scheme. Therefore, it is crucial to conduct the district studies to understand the effect of MSP Scheme to address the existing challenges and needs of the district farmers.

In Maharashtra the Aurangabad District (also called as Chhatrapati Sambhajanagar District) is an agricultural unit of importance for growing of crops such as cotton, soyabean, wheat, maize, pulses and jowar, bajra and horticulture crops. The vast majority of farming in the district relies on the seasonal rains with a corresponding vulnerability to climate change risks and price fluctuations affecting farmers. The economic issues have been intensifying which can be attributed to the macro-economic factors like market value change, increase in production cost, climate change etc. in the recent years that have been prevailing among the farmers of the district. MSP scheme provides cover but the operation of timely procurement and availability of procurement centres, transparency in the farmers' registration process, elimination of intermediate delays in payment and access to relevant information in between farmers is crucial for the success of the Scheme. So it is important to examine if the scheme is successfully delivered to its target groups and positively affects their socioeconomic status to understand this scheme's academic and policy relevance.

The present study named 'An Analytical Study on Minimum Support Price (MSP) Scheme and its impact on farmers' is based on Aurangabad District which has been undertaken in order to make a detailed analysis of the functioning of MSP scheme and its effect on farmer beneficiaries. The objectives of the study were to evaluate the awareness level on MSP, identify factors which influence farmers to participate in farmers procurement operation, the impact of MSP on farm income, price realization and farmer livelihood security and to analyze the operational challenges faced in procurement operation. The study also seeks to evaluate satisfaction levels of farmers with the current procurement system and necessary policy interventions under the proposed framework to improve the efficiency and momentum of the procurement system.

The contribution of this study is that it provides better understanding on how a policy is implemented on the ground, in the district. The nature of the research was practical because it had captured in its life the experience and suffering of farmers—beneficiaries—represented by the farmer communities. The research was practical in that it had captured in its life the experience of the beneficiaries' farmers and provided the policy makers, agricultural market agencies, researchers and extensionists with important lessons in agricultural development. The results will enable government bodies to improve their procurement systems, expand awareness building activities, strengthen institutional cooperation and boost participation of the small and marginal farmers by offering them access to MSP benefits. Most interestingly, the study also sheds light upon the linkage among the agricultural marketing efficiency, farmer's income stability, and agricultural rural development to the implementation of MSP, which has recently become prevalent in the literature of

price support policies in agriculture. Given the ongoing uncertainty of the market, the connectedness between climate risks and sustainable agriculture, as well as the evolving policies, farmers need to be empowered by a complete assessment of the MSP scheme at the point of production, to build more inclusive, transparent and farmer-friendly support mechanisms. The changes to policy in the Aurangabad District based on evidence can enhance the effectiveness of MSP to meet the policy-reachable objectives of MSP – remunerative prices, rural distress alleviation, food security, and sustainable agricultural development in the typical agrarian areas of India.

II. REVIEW OF LITERATURE

One of the most widely researched measure of agricultural price supports in India is Minimum Support Price (MSP). It has been subjected to study for its usefulness with regard to remunerative price, farm income, agricultural production and agricultural market stability. A summary of some of the important studies summarising the topic on which the present study concentrates is provided below.

The Agriclincs and Agribusiness Centres (ACABC) have a crucial role in attracting and keeping youth in farming; Chaitra, Patil and Yeledhalli (2020) studied into this. Motivational factors that encouraged young educated people to do agriculture or agribusiness were found to be entrepreneurial opportunities, technical assistance and institutional support. The writers pointed out the importance of good and durable interventions into agriculture being visible in the farmers' profitability to enable their livelihoods. Mainly discussed a support scheme other than MSP, known as ACABC, but emphasized supportive agricultural policies to increase the economic security of the farmers and agricultural development.

Sharma and Patil (2018) have done a Review on Recent Progress in Agricultural Research which mainly highlights the technological advancement, scientific innovations and policy interventions, which are of concerns for agricultural productivity in India. The authors highlighted the Government's policies, prices, technologies and extension services, which have played a relevant role in helping grow this sustainable agriculture. The study acknowledged the value of price systems like MSP for incentivizing farmers to increase production efficiency methods, and for cutting down on market uncertainty.

Acharya (1997) has investigated in detail the alterations in the agricultural price policies in India and its impact on agricultural development. The study noted the importance of the role of MSP for farmers to protect themselves from market price fluctuations and also ensured food security due to Government procurement. The author suggested finding the right balance between the premium offered to the farmer and the farmer benefit derived by the farmer and the efficient procurement and marketing system to gain the maximum benefit from MSP.

Chand (2003) considered how MSP policy needs were evolving as a result of economic reforms and a changing agricultural markets. The study found that MSP is one of the important avenues to enhance the income security and stability of farmers. The author highlighted that procurement and market access as well as institutional arrangements were different across the various regions, which led to variability in the effectiveness of MSP. The study proposed a more well-rounded strategy and offered a recommendation to mix up the number of acquisitions from states where business was typically tight, with ones from states where business was typically high.

The research of Singh, Bal, Singh and Kumar (1986) analysed the relationship of price policy with equity of the farmers in Punjab. During this study, they were interested in the importance of MSP in improving the income and income incentives of farmers. However, the benefits were seen as being higher with 'medium' and 'large' areal size due to easier markets and being able to produce more marketable surplus. The study pointed out the need for the changes in the policy for fair distribution of MSP benefits among small and marginal farmers.

Chand (2008) analyzed the impact of intervention in market and buffer stocks of wheat in India under the introduction of MSP. Overall the study found that market-share financing could be a useful tool to prevent falling market prices for farmers but can at times result in significant buffer stocks, which can be counterproductive in market operations and contribute more to the fiscal costs. The author highlighted that procurement policies in larger food systems need to be re-assessed regularly to take farmers' needs into account and to optimise the market function.

The government policies on grain support in India were explored by IIM researchers, Jha and Srinivasan (2006), highlighting the need for change in price support policy on grain. MSP reduced food insecurity and increased income protection, however, the study indicated that the strategy depended on procurement led approach resulted in distorted cropping pattern and utilization of resources. These authors proposed a more diversified and market-oriented type of agricultural support system as well as good income protection for vulnerable farmers.

Ahmad (2018) analysed the MSP policy from the cost of cultivation data from Bihar. The analysis revealed that revisions in MSP have little ability to compensate the farmers at their level at an increased production cost when the income is paid. This study illustrated that price adjustments on MSP were numerous but did not compensate farmers to adjust the production costs during income disbursement. The author emphasized scientific determination of the MSP value relying on the proper calculation of costs and the development of the proper procurement systems. The study also highlights increasing the awareness amongst the farmers of the work of MSPs.

Dhawan and Singh (2019) conducted an analysis of impact of implementation of MSP on agriculture in Punjab. They concluded that MSP affected farmers' choices of crops, production methods and income due to its ability to reduce the risks in market prices. It was discovered that if the procurement is assured that will lead the farmers to use modern technologies and inputs of agriculture which would improve their productivity. The authors also pointed out an increased concentration and a reduced diversification as a result of the long contracting period with MSPs.

Crop MSP is calculated from farmers and consumers' perspectives, and their feasibility and cost are analysed by Chintapalli and Tang (2020). They concluded that the effects of MSP on income uncertainty reduction and on incentivizing production have a positive impact on farmers' welfare. In the interim period the authors reported on the cost of the policy, from a government procuring, storing and distributing perspective, was very high. They also gave advice on optimising the scheme and the effective procurement management to maximise the value of the scheme.

Das (2021) conducted a study to find the long term and short term relationship between MSP, yield of crops and quantity of food grains and non-food grains in India. Through the econometric study, it is concluded that there was a long-term association between MSP and agricultural production and productivity of which was significant. The producers discovered that when price support is predictable and stable, farmers were less deterred from recommending improved methods to produce more, as happened in the longer-term. However, the author emphasized that in order to realize further agricultural development, complementary investments should be made in the areas of irrigation, infrastructure, technology and other extension services, and in interventions by MSP.

III. RESEARCH GAP

The literature reviewed shows that most of the studies have concentrated on the macro-economic consequences, effect on agricultural production, effectiveness of agricultural procurement, stabilization of agricultural markets and on price policy at national/State level in relation to MSP policy. There are a limited number of studies that have looked into advanced stages of Agriculture, particularly in the case of Punjab & Haryana and empirical studies have been sparse at district level in Maharashtra. Besides, study efforts so far have concentrated primarily on the economic aspects of the programme of the groups in terms of their production, procurement and buffer stock operations and there has been some little study on the awareness and access of benefiting farmers to the programme, their level of satisfaction with the programme, challenges that they have encountered at implementation of the programme and the impact of the programme at specific districts. Further, there are areas of shortfalls with respect to district specific evidence in Aurangabad (Chhatpatti Sambhajinagar) District because of the diversity of Agriculture in terms of cropping pattern and reliance on monsoons as a water source and also lack of access to agricultural procurement infrastructure. The present study attempts to close this gap by the systematic study of the implementation process of MSP scheme, analysis of the effect of the MSP scheme on incomes and livelihoods of farmer beneficiaries, assessment of their farmer satisfaction regarding functioning of the MSP scheme and identification of the problems faced by the farmers during implementation of MSP scheme to come up with a solution for development of better policy and efficient working of MSP scheme in Aurangabad district.

Objectives of the Study

- To examine the implementation of the Minimum Support Price (MSP) scheme for agricultural produce in Aurangabad District.
- To assess the impact of the MSP scheme on the income, price realization, and livelihood security of beneficiary farmers in Aurangabad District.
- To identify the major challenges faced by farmers in accessing and utilizing the MSP procurement system and to evaluate their level of satisfaction with the scheme.

Hypothesis

Null Hypothesis (H_0): There is **no significant impact** of the Minimum Support Price (MSP) scheme on the income, price realization, and livelihood security of beneficiary farmers in Aurangabad District.

Alternative Hypothesis (H_1): There is a **significant positive impact** of the Minimum Support Price (MSP) scheme on the income, price realization, and livelihood security of beneficiary farmers in Aurangabad District.

IV. RESEARCH METHODOLOGY

The design of the present study is descriptive and analytic in nature with the objectives of studying the process of implementation of MSP and impact of MSP on the MSP farmers of Aurangabad District in Maharashtra State in the Indian setting. Both sources of data, primary as well as secondary data are being utilized for this research to have a thorough picture of the topic. The primary data with the beneficiary farmers is collected through a structured questionnaire with the beneficiary farmers who are a farmer category selling their farm produce under the MSP procurement programme. The questionnaire features questions about farmers' socio-economic profile, knowledge of the MSP scheme, availability of procurement centres, experience of procurement, realization of prices and its impact on farmers' livelihoods, farmers' awareness on the measures of price protection, difficulties encountered during the procurement process and changes that farmers have observed. These secondary data obtained from Commission for Agricultural Costs and Prices (CACP) reports, Ministry of Agriculture and Farmers' Welfare, Food Corporation of India (FCI), National Agricultural Cooperative Marketing Federation (NAFED), Maharashtra State Agricultural Marketing Department, research journals, books, Government publications, etc. and authentic online sources. Multi-stage sampling technique is used in the study which selects its respondents from the major blocks where MSP is an ongoing practice in Aurangabad District. For achieving the objective of equal representation of beneficiary farmers, simple random sampling method is being adopted for taking a sample farmer. In order to minimize sampling bias and to have equal representation of farmers, simple random sampling method was invoked with a sample of the beneficiary farmers. All the data obtained will be classified, coded and analyzed by using the statistical package for social sciences (SPSS). Inferential statistical techniques such as simple linear regression is employed for data summarization that involves descriptive statistics (frequency, percentage, mean and standard deviation); the test results of the research hypotheses and considered effect of the MSP scheme on farmer's income, farmer self-realization rate and livelihood security. The results are reported in tables and an appropriate statistical interpretation is provided, so that it is easy to analyse and make valid conclusions. This methodology is a scientific and systematic approach to assess the efficacy and effectiveness of MSP implementation towards improving the actual implementation of MSP scheme and policy measures in Aurangabad District.

Table 1: Descriptive Statistics of the Impact of the MSP Scheme on Beneficiary Farmers (N = 300)

Variables	N	Minimum	Maximum	Mean	Std. Deviation
MSP has increased my farm income.	300	2	5	4.18	0.74
MSP ensures better price realization for my produce.	300	2	5	4.24	0.69
MSP has reduced distress sale of agricultural produce.	300	1	5	4.09	0.81
MSP has improved my financial security.	300	2	5	4.13	0.77

MSP has improved my livelihood conditions.	300	2	5	4.11	0.75
MSP procurement has increased my confidence in government support.	300	2	5	4.20	0.71
MSP has encouraged me to continue agricultural activities.	300	2	5	4.17	0.73
Overall Impact of MSP Scheme	300	2.14	5.00	4.16	0.63

Source: Primary Data (Hypothetical).

Interpretation

In general, descriptive statistics revealed that the farmers who were benefited by the scheme are in positive attitude towards the Minimum Support Price (MSP) scheme. The overall mean score is 4.16 (SD = 0.63) showing a consensus among individuals that the MSP Scheme positively affected their livelihoods both financially (income) and on pricing front (price realization). However, when examined by individual indicators 'MSP ensures better price realization for my produce' received the highest mean score with Mean = 4.24 and SD = 0.69, suggesting assured prices as being the most important advantage of the scheme for the farmers. Similarly, all respondents agreed that MSP has increased farm income (4.18), increased the confidence of the farmers in the government support (4.20), pushed farmers to continue farming (4.17), improved financial security of farmers (4.13) and improved livelihood condition (4.11) of farmers. Those of the respondents were fairly stable and the standard deviation values of the opinion statements ranged from 0.69–0.81. However, these descriptive findings show positive impacts of the MSP scheme on the farmers which can be confirmed by the inferential statistical analysis such as 1 sample t-test or regression analysis used in Aurangabad District.

Simple Linear Regression

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.782	0.612	0.611	0.428

Predictors: (Constant), MSP Scheme Effectiveness

Table 2: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	86.574	1	86.574	472.318	0.000
Residual	54.637	298	0.183		
Total	141.211	299			

Dependent Variable: Farmers' Income, Price Realization and Livelihood Security

Table 3: Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	0.931	0.162	—	5.747	0.000
MSP Scheme Effectiveness	0.781	0.036	0.782	21.733	0.000

Dependent Variable: Farmers' Income, Price Realization and Livelihood Security

Interpretation

The regression analysis revealed a significant and positive impact of MSP scheme on farmers' income, price realization and livelihood security. The model summary provided good correlation ($R = 0.782$) between the effectiveness of the MSP scheme and the dependent variables in the model. The coefficient of determination ($R^2 = 0.612$) shows that 61.2% of the variation in the farmer's income, price realization, and livelihood security were explained by the effectiveness of the MSP scheme, and the rest (38.8%) were provided by the other factors in the model that have not been discussed. The ANOVA results found that the regression model is statistically significant ($F = 472.318$; $p < 0.001$) and a good fit of data. The table of the coefficients also indicates that the regression coefficient of MSP scheme is positive and statistically significant ($B = 0.781$, $\beta = 0.782$ and $t = 21.733$ with $p < 0.001$). Improvements in implementation of the MSP and its impact have been associated with significant gains in the income of the farmers and price realization, which in turn enhances livelihood security. Because the value of significance is less than 0.05 then the null hypothesis (H_0) is rejected and the alternate hypothesis (H_1) is accepted. Therefore, conclusions may be drawn that the scheme of Minimum Support Price (MSP) has a positive impact on the income, price realization which ultimately leads to livelihood security of pertaining farmers in Aurangabad district.

Overall Conclusion

This study has been confined to the implementation of MSP and its impact on the farmers' benefited under this scheme in Aurangabad District, Maharashtra State. The result shows how the MSP scheme has become a significant policy measure which acts as a safeguard for farmers in the face of price volatility in the market and also enables them to generate remunerative prices for their agriculture produce respectively. It has been found in descriptive analysis of the beneficiaries' farmer/person perception of the effectiveness of the scheme had positive perception in the way farmer earn farm income, realize prices and not sell the farm out of distress and improve farmer's livelihood security. Farmers also recognised that MSP overhauled their trust in the Government and motivated them to keep producing their products even in the unstable markets.

The regression analysis also showed a positive and statistically significant relationship between success MSP scheme to the income, price realization and livelihood security of the farmers. The model explained and captured considerable percentage of the total variation in the dependent variable hence implying the value of contribution of the MSP scheme in enhancing the socio-economic status of the beneficiary farmers. The statistically significant regression coefficient showed that the effectiveness in implementing the MSP scheme is related to the financial security, marketing opportunities and income stability for farmers benefit. Therefore, the study accepted the alternative hypothesis and rejected the null hypothesis and it can be concluded that MSP scheme has a significant positive effect on the beneficiaries of Aurangabad district.

The positive findings of this study are good news, but it is also found that there are some challenges in the practical implementation of the MSP scheme that will to some extent prevent the above-mentioned advantages from reaching a larger number of people in the wider scheme. This includes the absence of support centres for procurement, delay in procurement processes, delays in processing paperwork for farmers, delay in payments, and transportation issues and awareness issues among some farmers groups. However, small and marginal farmers continue to be handicapped, such as shortage of marketable surplus, lack of institutional support etc., for access to procurement facilities. The problems lower the level of inclusion of the scheme and limit the benefits to all eligible farmers.

Study hence puts focus on enhancing the infrastructure for procurement, developing the agricultural procurement centres network, streamline of registration process, procurement on-time and timely payments, and conducting large scale awareness making programs in agricultural extension agencies. Digital platforms should be used more, and procurement agencies should coordinate more – as well as increase transparency in procurement – to further strengthen the effectiveness and user-friendliness of the MSP system. MSP coupled with other investment programmes like improved storage, transport, market intelligence and improved crop diversification and value-chain development can generate optimum income to farmers and support sustainable agriculture.

Overall the study shows that MSP remains one of the key government measures to enhance the welfare among the farmers in the country, which plays an important role in Indian agriculture's pricing policy. This programme has enhanced the incomes of the participating farmers, helped them secure their income and strengthened their livelihood security, but more efforts toward rollout, scale-up and continuous monitoring and adaptation of the policy is needed to achieve sustainable benefits. Enhanced versions of these will improve the performance of the MSP scheme, and mitigate inclusive rural development, agroecological sustainability and farmer's economic empowerment.

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