



The Role of PMFBY in Odisha's Agricultural Sector: Performance Assessment

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Date of Submission: 03-04-2024

Date of Acceptance: 14-04-2024

Abstract:

The most formal and efficient approach for farmers to reduce their agricultural risk is through crop insurance. Both before and after independence, the Indian government implemented a number of crop insurance programmes. The primary objective of this paper is to examine how the Pradhan Mantri Fasal Bima Yojana performed from 2016 to 2020, broken down by state and season. The amount of loanee farmers covered the amount of non-loanee farmers covered, the area and sum insured, the premiums collected, the claims paid, and the number of farmers who benefited between 2016 and 2020 are the metrics used to evaluate the performance. The result of the study shows that in the year of 2017-18, the number of loanee and non-loanee was 1733232 and 160631 respectively. The annual growth rate of loanee was 0.94% and non-loanee was 0.76 which they contributes 0.10% to the total annual growth rate. The insurance companies took very significant contribution i.e., total claim paid by the Insurance Companies in Odisha was 4077.8 crore. This study also found that, very few businesses, such as Oriental in 2019–20, AIC in 2019–20, and Tata AIG in 2017–18, have not resolved all insurance claims. By adopting the policy recommendations outlined above, policymakers can enhance the resilience of farmers and contribute to the sustainable development of Odisha's agricultural sector.

Keywords: PMFBY, Odisha, Agricultural sector, Crop insurance, Performance assessment
JEL Classification: Q14, Q18, Q54, Q58

I. Introduction

The agricultural sector is the backbone of India's economy, contributing significantly to its GDP and employing a vast portion of the population. In the state of Odisha, agriculture forms the primary livelihood for a substantial portion of

its populace, with a majority engaged in smallholder farming (Majumder et al. 2023). However, the sector faces numerous challenges, including unpredictable weather patterns, susceptibility to natural calamities, and limited access to financial resources and modern farming practices (Tripathi et al. 2023). In response to these challenges, the government introduced the Pradhan Mantri Fasal Bima Yojana (PMFBY), a flagship crop insurance scheme aimed at providing financial support to farmers in the event of crop failure due to natural calamities or other unforeseen circumstances.

The implementation and effectiveness of PMFBY in Odisha's agricultural sector hold significant importance, given the state's vulnerability to natural disasters such as cyclones, floods, and droughts (Majumder et al. 2023). This paper endeavours to assess the performance of PMFBY in Odisha, examining its impact on farmers, agricultural productivity, and overall socio-economic development in the region.

A thorough analysis of PMFBY's role in Odisha necessitates an exploration of its key features, including coverage, premium rates, claim settlement mechanisms, and the involvement of various stakeholders such as insurance companies, banks, and government agencies. Understanding the scheme's operational dynamics is crucial for evaluating its effectiveness in providing timely and adequate compensation to farmers affected by crop losses (Tripathi et al. 2023). Furthermore, this assessment will delve into the challenges and limitations encountered in the implementation of PMFBY in Odisha. Issues such as low awareness among farmers, bureaucratic hurdles in claim processing, and discrepancies in assessing crop damages require attention to enhance the scheme's efficacy and reach.

By critically analysing the performance of PMFBY in Odisha's agricultural sector, this study



aims to provide insights into its strengths, weaknesses, and potential areas for improvement. Ultimately, the findings of this assessment can inform policymakers, stakeholders, and practitioners in refining strategies to bolster crop insurance mechanisms and ensure the resilience and sustainability of Odisha's agricultural sector in the face of evolving challenges.

II. Review of Literature

Majumder et al. (2023), have analysed the progress of crop insurance schemes in Odisha with special insights into the Pradhan Mantri Fasal Bima Yojana (PMFBY). The results of the study revealed that among the earlier schemes, The National Agricultural Insurance Scheme (NAIS) outperformed the other preceding schemes in terms of penetration and area coverage, as well as numerous other financial metrics including premiums paid and claims resolved. The present study, which analyses a number of factors, reveals that PMFBY covered a larger area under paddy crops. It also saw the highest percentage of farmers insured (41.26% in 2017) and the highest coverage of area as a percentage of gross cultivated area (22.12% in 2019) among farmers who were benefited. It is recommended to initiate an aggressive awareness campaign and set up a customer grievance cell at the local level in order to improve the current PMFBY scheme, which was recently redesigned and made optional for cultivators. This will encourage more farmers to enrol in crop insurance.

Kumar & Rani (2023), have analysed the performance of Pradhan Mantra Fasal Bima Yojana State wise and season wise from 2016 to 2020. The number of loanee farmers covered, the number of non-loanee farmers covered, the area and sum insured, the premiums collected, the claims paid, and the number of farmers who benefited between 2016 and 2020 are the metrics used to evaluate the performance. Using a straightforward percentage analysis, it was discovered that just a few States—Madhya Pradesh, Rajasthan, Maharashtra, and Uttar Pradesh—are benefiting from this policy. The present study concludes that although participation has been steadily rising, the program is far from the goals established when it was first implemented.

Tripathi et al. (2023), this paper provides a concise review of select government agriculture schemes in India, focusing on their objectives, implementation strategies, and overall impact. It focuses on how these programs have changed over time to meet the various problems that the agriculture industry faces, such as fluctuating

markets, resource limitations, and climate change. The current study looks at well-known programs like the Soil Health Card Scheme, which aims to improve crop yields and soil fertility, the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), which seeks to directly support farmers' income, and the National Agricultural Market (e-NAM), which establishes a centralized platform for smooth agricultural trade. They have come to the conclusion that the Pradhan Mantri Fasal Bima Yojana (PMFBY) and the Rashtriya Krishi Vikas Yojana (RKVY) are intended to improve agricultural infrastructure and provide farmers with crop loss insurance, respectively.

Panigrahi et al. (2023), in their study "An analytical study on the extent of enrolment, coverage and consequent relief enjoyed by the crop insurance policy holders under PMFBY in Bhadrak district of Odisha". They have examined the degree of enrolment and the ensuing alleviation that the rice growers covered under the Pradhan Mantri Fasal Bima Yojana have experienced. According to the study's findings, 36.66% of farmers believe the Pradhan Mantri Fasal Bima Yojana to be the most helpful program; 32.5% of farmers agree with the above statement, while 30.84% of farmers disagree. Just 15% of farmers view the National Agricultural Insurance Scheme as advantageous, whilst 65.84% of the farming community disagrees. The authors propose that a deficiency in widespread awareness campaigns and training initiatives has resulted in the majority of the targeted farmers being inadequately informed about the crop insurance plan, which serves as a lifeline under hazardous situations.

KUMARA & KUMARI (2020), The study aimed to overview the numerous crop insurance schemes in India from its initial schemes to the present schemes. The study evaluated the Pradhan Mantri Fasal Bima Yojana's (PMFBY) effectiveness from 2016–17 to 2018–19 in comparison to the Restructured Weather Based Crop Insurance Scheme (RWBCIS). The number of farmers covered and the total amount of agriculture insured under PMFBY and RWBCIS were negative (-1.04% & -4.86%) and positive (1.47% & 8.22%), respectively, according to the growth rate analysis performed to look at these two factors. It is recommended that decision-makers reevaluate the matter. Farmers who have participated in subsidised crop insurance plans have received financial assistance for managing agricultural risks.

Priyanka et al. (2019), have studied The Genesis of Pradhan Mantri Fasal Bima Yojana. The



present paper revealed that the PMFBY has a special mention for its digitalization, lesser premium, and more hazard coverage. They have determined that there are drawbacks to PMFBY as well. AADHAR requirements, for example, are unique to PMFBY. But the way farmers view things, how unaware they are, how long it takes to process claims, how high the actuarial rates are, and how difficult it is to enrol are all identical to PMFBY's predecessors.

III. Objectives

- i) To examine the PMFBY's performance evaluation in Odisha with regard to the insurance covered, the crop insured, and the premium split amongst various entities
- ii) To comprehend the function of several insurance providers associated with this crop insurance programme PMFBY

IV. Data Sources & Methodology

The present study is based on secondary data to evaluate the performance of PMFBY in Odisha. The study is basically in descriptive nature. The study has collected the secondary data from the official website of Ministry of Agriculture and Farmers Welfare, various report of PMFBY, Department of Agriculture and farmer's Empowerment, Government of Odisha. The analysis of data has been conducted by constructing different tables, simple percentage calculation and applying annual growth rate formula.

V. Results & Discussion

Coverage of farmers under PMFBY:-

PMFBY is available for all farmers consisting of loanee and non-loanee. There is a voluntary choice for loanee and non-loanee for opting this scheme. At first PMFBY coverage is attributed to deduplication caused by the mandated implementation of Aadhar, the announcement of debt waiver schemes and the integration of land records in Odisha.

Table no-1. Three Year's Coverage of Loanee and Non-Loanee Farmers Under PMFBY in Odisha

Name of the year	Loanee	AGR (%)	Non-loanee	AGR (%)	Total	AGR(%)
2017-18	1733232	----	160631	----	1893863	----
2018-19	1815678	0.94	282842	0.76	2098520	0.10
2019-20	3049678	0.67	1672287	4.91	4721965	1.25

Source: Ministry of Agriculture and Farmers Welfare

Annual Growth Rate(AGR):-

Annual growth rate can be calculated by the formula $\frac{\text{current year value} - \text{previous year value}}{\text{previous year value}}$. (Current year value-previous year value/previous year value)

One measure of the effectiveness of insurance programmes is the quantity of farmers they cover. In 2017-18, the number of loanee and non-loanee were 1733232 and 160631 respectively. The data indicates the significant increase in inclusion of loanee and non-loanee farmers under PMFBY in 2018-19. The annual growth rate of loanee was 0.94% and non-loanee was 0.76 which they contributes 0.10% to the total annual growth rate. But the percentage of coverage of loanee farmers was more than the coverage of non-loanee

farmers in this scheme. The total annual growth rate in 2019-20 was 1.25 and it was huge positive growth than 2018-19. In 2019-20 the coverage of non-loanee farmers was more i.e 4.91% than loanee farmers i.e 0.67%. The increase of number of farmer's coverage under this scheme was due to the cause of government initiatives like awareness programme, various camps held in rural areas to acknowledge farmer regarding crop-insurance scheme. There was advertisement in National and newspaper. Various telecast through audio-visual media, distribution of pamphlets, SMS, fairs, mela have been made. Banks and other insurance intermediaries also made this scheme more successful.



Table No-2. Sharecroppers and Tenant Farmers Covered Under PMFBY In Odisha (in Kharif Season)

Name of the year	Sharecropper Applications (in lakhs)	Farmer Applications (in lakhs)	Tenant Farmer Applications (in lakhs)
2018-19	94.70		75.59
2019-20	248.24		401.33

Source:-Ministry of Agriculture and Farmers Welfare

However, tenants and sharecroppers who cultivate the notified crops in the notified areas are also qualified for coverage. Farmers ought to, nevertheless, have an insurable interest in the lands and crops that are covered. In 2018-19, the

application of sharecropper farmer and tenant farmer were 94.70 lakh and 75.59 lakh respectively. These application number was shifted to 248.24 for sharecropper farmers and to 401.33 for tenant farmer.

Table No-3. Insurance Premium Sharing Data from Kharif 2016 to Kharif 2019 in Odisha

Total Premium Paid by the farmer (Rs. Crore)	688.4
Premium Amount Shared by the State Govt. (Rs. Crore)	1917.2
Premium Amount Shared by the Centre (Rs. crore)	1917.2
Total Premium collected by the insurance companies (Rs. crore)	4522.9
Total Claims Paid by the Insurance Companies in Odisha (Rs. crore) (Provisional)	4077.8

Source:-Ministry of Agriculture and Farmers Welfare

The PMFBY aim was to make less burden on farmers. So the farmers shared least total premium i.e 688.4 Cr in Odisha. Premium amount shared by the state, centre and insurance companies

were 1917.2, 1917.2 and 4522.9 crore respectively. The insurance companies took very significant contribution i.e total claim paid by the Insurance Companies in Odisha was 4077.8 crore.

Table No-4. Odisha's Crop Notified During Kharif and Rabi Seasons Under PMFBY

PMFBY/ KHARIF	Cotton (kapas), Ginger, Groundnut (pea Nut/mung Phalli), Maize (makka), Paddy (dhan), Pigeon Pea (red Gram/arhar/tur), Turmeric
PMFBY/ RABI	Black Gram (urd Bean), Green Gram (moong Bean/ Moong), Groundnut (pea Nut/mung Phalli), Mustard, Onion, Paddy (dhan), Potato, Sugarcane (noble Cane), Sunflower (suryamukhi)

Source: -Ministry of Agriculture and Farmers Welfare

Under PMFBY various types' crops has been insured. They are food crops like cereal, Millet and pulses,oilseeds,Annual commercial/Annual horticultural crops. In Odisha, Kharif crop like cotton, ginger, maize, paddy, turmeric and pigeon pea are coming under this scheme. The crop like Black gram, Green Gram, Groundnut, Mustard, Onion, Paddy, Potato, Sugarcane and Sunflower are insured during Rabi season.

Empanelled Insurance Companies under PMFBY:-

The Department of Agriculture, Cooperation, and Farmers Welfare has appointed 18 general insurance companies, including all five public sector general insurance companies, as empanelled partners for the PMFBY programme throughout the nation.

Table No.5:- Company-Wise/Year-Wise Details Of Premium Collected and Claims Paid Under PMFBY Since Inception of These Schemes in Odisha Are As Follows.

Year	Name of Company	Insurance Premium (in crore)			Sum Insured (in crore)	Claims filed by the farmer (in crore)	Claims Settled (in crore)	% of claims settled	Pending Claims (in crore)	Rejected Claims (in crore)
		Farmers share	State Share	Centre share						



2016-17	Chola MS	0.3	0.1	0.1	17.6	1.0	1.0	100%	---	----
	Future Generali	43.7	55.8	55.8	2205.6	61.3	61.3	100%	----	----
	HDFC Ergo	19.9	28.0	28.0	994.4	28.0	25.6	25.6	----	---
	ICICI Lombard	34.4	35.8	35.8	1709.0	253.7	253.7	100.0%	----	----
	National	0.7	0.4	0.4	44.0	0.3	0.3	100.0%	----	----
	New India	1.2	0.2	0.2	82.8	0.5	0.5	100.0%	---	----
	Reliance General	15.2	22.0	22.0	748.9	38.7	38.7	100.0%	----	----
	SBI General	24.7	55.8	55.8	1233.3	50.1	50.1	100.0%	----	---
	United India	2.6	--	--	226.7	1.6	1.6	100.0%	----	----
2017-18	AIC	30.4	68.2	68.2	1525.3	157.4	157.4	100.0%	----	----
	Chola MS	29.9	69.2	69.2	1483.9	296.8	296.8	100.0%	----	---
	HDFC Ergo	0.5	0.6	0.6	30.5	2.9	2.9	100.0%	----	---
	National	32.2	92.2	92.2	1607.0	854.0	854.0	100.0%	----	----
	Tata AIG	49.5	107.1	107.1	2457.0	469.0	468.7	99.9%	0.3	----
	United India	2.8	0.02	0.02	217.9	37.6	37.6	100.0%	---	---
2018-19	Chola MS	40.8	65.2	65.2	2038.9	240.6	240.6	100.0%	----	----
	Oriental	41.2	136.4	136.4	2141.2	492.6	492.6	100.0%	---	----
	Reliance General	27.6	95.6	95.6	1392.2	167.8	167.8	100.0%	----	----
	Royal Sundaram	63.0	172.6	172.6	3168.5	269.5	269.5	100.0%	----	----
2019-20	AIC	42.2	191.8	191.8	2118.8	166.0	127.3	76.7%	38.7%	---
	HDFC Ergo	56.7	204.1	204.1	2834.1	113.5	113.5	100.0%	----	----
	Oriental	50.4	178.4	178.4	2523.8	615.8	369.0	61.5%	231.0	15.8
	Reliance General	28.7	107.6	107.6	1486.8	10.8	10.8	100.0%	----	---
	Royal Sundaram	49.9	229.9	229.9	2484.0	36.6	36.6	100.0%	----	----

Source:- Ministry of Agriculture and Farmers Welfare

The insurance firms have been involved in PMFBY in a big way. Nearly every business in Odisha involved in this was tasked with resolving the farmers' insurance claim. However, very few businesses, such as Oriental in 2019–20, AIC in 2019–20, and Tata AIG in 2017–18, have not resolved all insurance claims.

VI. Policy Recommendations & Conclusion

Since the Pradhan Mantri Fasal BimaYojana (PMFBY) is still in its infancy, the majority of farmers are still unaware of the

program's advantages. Ineffective information network distribution prevents the implementing agency's message from reaching the intended recipients. The majority of farmers do not receive money in times of need since there is a significant delay between the time they enrol to receive assistance and the actual repayment period. This creates unfavourable sentiments throughout the farming community. Introduce innovative insurance products such as index-based insurance to provide coverage for non-traditional crops and mitigate risks associated with market fluctuations.



The present study found that in 2017-18, the number of loanee and non-loanee were 1733232 and 160631 respectively. The data indicates the significant increase in inclusion of loanee and non-loanee farmers under PMFBY in 2018-19. The annual growth rate of loanee was 0.94% and non-loanee was 0.76 which they contributes 0.10% to the total annual growth rate. In 2018-19, the application of sharecropper farmer and tenant farmer were 94.70 lakh and 75.59 lakh respectively. The insurance companies took very significant contribution i.e total claim paid by the Insurance Companies in Odisha was 4077.8 crore. This study also shows that, very few businesses, such as Oriental in 2019–20, AIC in 2019–20, and Tata AIG in 2017–18, have not resolved all insurance claims. Effective implementation of PMFBY in Odisha's agricultural sector requires a multi-pronged approach focusing on awareness, risk management, transparency, customization, farmer participation, and institutional coordination. The authors have suggested that, by adopting the policy recommendations outlined above, policymakers can enhance the resilience of farmers and contribute to the sustainable development of Odisha's agricultural sector.

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