

A Study on Effectiveness of the PMFBY among Farmers with Special Reference to Ramnagara and Tumkuru Districts

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Abstract

Agriculture is the source of livelihood of the majority of its population and being one of the most disaster prone countries, crop insurance occupies an important place in India. The plight of farmers in India is exacerbated by systemic neglect, pushing them to the margins of society. Crop failures resulting from natural disasters and adverse weather conditions add to their hardships, often leading to extreme despondency and tragically, suicides. Present study carried out to understand the effectiveness of PMFBY among farmers. A sample of 115 Farmers was considered to collect opinions through a structured questionnaire in Ramnagara and Tumkuru districts in Karnataka. The factors under the study were Awareness, Financial security, income stability, Loan repayment towards the future acceptance of effectiveness of the PMFBY among farmers.

Keywords: Agriculture, PMFBY, Awareness, Financial Security, Loan Repayment.

Introduction

Agriculture is considered the backbone of Indian economy. The agriculture sector determines the growth and sustainability of Indian economy. About 52% of India's workforce and 21% of India's population still relies on agriculture for employment and livelihood. The agriculture sector is expected to play a vital role in India economy as it helps in poverty alleviation, preventing migration, ensuring food security, creating employment opportunities, social upliftment, regional and industrial development, foreign exchange earnings, easing inflation, etc. but, this sector is exposed to many risk. Among theme climate change is considered to be the major one. In recent years, the climate change has badly affected the Indian agriculture sector. The climate change had affected the crop growth and quality, livestock health, farmers' productivity, soil quality, pests, etc. The first crop insurance pilot programme was started in 1972 with little coverage. In 1978, it was replaced by the Pilot Crop Insurance Scheme. In 1985, the first nationwide crop insurance scheme, the Comprehensive Crop Insurance Scheme, was implemented based on the area approach.¹ The National Agriculture Insurance Scheme replaced the scheme in 1999, which was later changed to the Modified National Agriculture Insurance Scheme. Apart from these schemes, the Government of India has introduced other crop insurance pilot projects and schemes, such as the Pilot Scheme on Crop Insurance (2000), the Farm Insurance Scheme (2003), and the Weather-Based Crop Insurance Scheme (2007). The repeated modifications in insurance schemes were introduced to provide better results regarding claims, premium rates, and other factors (Gulati et al. 2018). At present, two crop insurance schemes—the Pradhan Mantri Fasal Bima Yojana and the Restricted Weather-Based Crop Insurance Scheme—are operational.

The 'Pradhan Mantri Fasal Bima Yojana' was launched by the Government of India in kharif in 2016 and replaced previous schemes such as the National Agriculture Insurance Scheme (NAIS) and Modified National Agriculture Insurance Scheme (MNAIS). The insurance scheme operated on an "area approach". The scheme was compulsory for farmers who took a loan from any financial source and voluntary for non-farmers, but the scheme was made optional for farmers from kharif 2020 (Tiwari et al. 2020). Various public and private insurance companies implemented the scheme, but under the overall control of the Ministry of Agriculture and Farmers' Welfare, Government of India. The Weather-Based Crop Insurance remains in place, but the name has been changed to the Restructured Weather-Based Crop Insurance Scheme. As such, the Indian Council of Social Sciences Research (ICSSR) launched a major project entitled "An Evaluation of Pradhan Mantri Fasal Bima Yojana for Haryana and Punjab: The Way Forward for Diversification"; thus, this study is undertaken to evaluate the project and study the effectiveness of the schemes on the farmers.

Review of Literature

Tiwari et al., (2020) considering the prevailing circumstances, the Indian government took a significant step by introducing the Pradhan Mantri Fasal Bima Yojana (PMFBY) on February 18, 2016. This initiative aims to mitigate agricultural risks and uncertainties, providing a stabilizing influence on farmers' incomes. Positioned as the government's flagship scheme for agricultural insurance in India, the PMFBY aligns with the overarching theme of "one nation, one scheme." Farmers who received loans from any financial institution were required to participate in the Pradhan Mantri Fasal Bima Yojana (PMFBY) at first, while farmers who did not get loans were free to sign up on their own. But beginning with the 2020 kharif season, even farmers may no longer participate in the program.

Gupta et al., (2020) The majority of farmers were aware that natural disasters like lightning, storms, cyclones, floods, and droughts were covered under the program. Farmers are aware that the Pradhan Mantri Fasal Bima Yojana was created to assist farmers in improving productivity via the use of improved technology. Crop loans through KCC are covered under compulsory coverage. Kharif, Rabi, and Annual Horticulture Crops are covered under PMFBY.

Brandstrand (2016) the business-related factors indicate that larger farms and farms with grain production as primary crop to a greater extent use insurance. Farmers with high level of diversification do not use crop insurance to the same extent as less diversified. This indicates that farmers with high risk expose are more likely to acquire insurance. The design of the insurance product is also found to be important for the insurance decision. Farmers that use insurance perceive that their yield level is higher than the average for their region. They also perceive a higher level of yield risk compared to uninsured farmers.

Jamanal, (2019) Modified National Agricultural Insurance Scheme (MNAIS) was launched in 2010. MNAIS featured actuarial premium rates and sought to provide enhanced benefits to farmers by covering risks such as prevented sowing/planting and post-harvest losses. It aimed to offer a minimum indemnity level of 70 percent, utilizing more precise calculations for threshold yield. However, even with this adaptation, the anticipated impact and acceptance were not fully realized.

Kalavakonda (2009) North Eastern Karnataka is prone to uneven rainfall patterns, which can lead to droughts or floods. These extreme weather events can have devastating effects on crops. Crop insurance provides a safety net for farmers, helping them recover from losses caused by such climatic fluctuations. Crop insurance is vital in North Eastern Karnataka to protect the livelihoods of farmers, stabilize the agricultural sector, and ensure food security in the region. It serves as a crucial tool in managing the risks associated with agriculture and contributes to the overall development of the area's rural economy.

Mohapatra et al., (2016) adequate awareness to be created among the farmers by educating the benefits of insurance to facilitate them to decide on the various tools in risk management. Efforts should be made by agricultural universities and the state department of agriculture, to sensitize the farmers. Increase in awareness on crop insurance scheme by encouraging social participation of farmers.

Objectives of the study

- To study the demographical factors of Ramnagara and Tumkuru districts farmers
- To study on effectiveness of the PMFBY among farmers of Ramnagara and Tumkuru districts
- To study the problems faced by farmers in PMFBY and provide suitable suggestions

Hypothesis

H0: Income stability, Loan Repayment, Future acceptance and financial security has no significant effectiveness of the PMFBY among farmers

Research Methodology

The present study was conducted in Tumkur and Ramanagara districts of Karnataka state during the year 2022- 23. From Tumkur district, Ramanagara districts were selected for the study, based on the highest number of enrolment and beneficiaries of the PMFBY. From Tumkur district, Pavagada and Sira taluks and Ramanagara district, Kanakapura and Channapattana taluks were selected for the study, based on the highest number of enrolment and beneficiaries of the PMFBY. The village-wise information relating to PMFBY was obtained from the Department of Agriculture, Tumkur and Ramanagara districts. The 12 villages having the highest number of beneficiaries in Pavagada, Sira, Kanakapura and

Channapattana taluks were selected. 30 respondents were selected from each taluk. From each village, 20 beneficiaries were randomly selected for the study. Thus, the total sample constituted to 115 farmers. The data were collected from 115 respondents through personal interview by using well-structured interview schedule. The data collected from the respondents were scored, tabulated and analyzed using suitable statistical methods.

Results and Analysis

Variables		Percentage	No.of respondents
Age (in years)	Up to 45	6	5.21
	45-65	7.6	66.08
	65 and above	33	28.69
Gender	Male	70	60.86
	Female	45	39.13
Education	Illiterate	36	31.30
	School	74	64.34
	UG	3	2.60
	PG	1	0.86
	Others	1	0.86
Marital status	Married	110	95.65
	Unmarried	4	3.47
	Widowed	1	0.86
Family type	Joint	35	30.43
	Nuclear	80	69.56
Family size	Up to 4	51	44.34
	4 and above	64	55.65
No. of. Family Members Participating in Farming	up to 2	46	40
	2 – 4	61	53.04
	4 and Above	8	6.95
Is farming primary occupation	Yes	112	97.39
	No	3	2.60
Farming Experience(in years)	up to 20	7	6.08
	20 – 40	39	33.91
	40 and Above	69	60
Total farm income(₹)	up to50,000	76	66.08

Classification of farmers	50,000 – 1,00,000	33	28.69
	1,00,000 – 1,50,000	3	2.60
	Above 1,50,000	3	2.60
	Marginal	59	51.31
	Small	38	33.04
	Medium	13	11.30
	Large	5	4.35
Area Insured(in hectares)	up to 1	72	62.61
	1 – 2	43	37.39

On analysis the socio-economic profile of the farmers, Majority (66.08%) of them were in the age group of 45 to 65 years. Male farmers constitute 60.86% and female farmers 39.13%. Majority of the sample farmers follow Hindu Religion (95.65%). The farmers were mainly educated up to school level (64.34%) and 31.30% were illiterate. The respondents were predominantly married (95.65%) and live as nuclear families (69.56%). The family size shows that 55.65% have more than four members in their family whereas 44.34% have up to four members. Agriculture is the primary occupation for 97.39% of the sample farmers. About 60% of the farmers have farming experience of more than 40 years and 33.91% of the farmers have 20 to 40 years of farming experience. For 53.04% of the respondents, 2-4 family members were helping in farming activities and for 40% of the respondents up to 2 family members help them in farming. Majority of the farmers 62.61% insured up to 2.5 hectares of land. Majority of the farmer (62.61%) have insured crops cultivated in up to 1 hectare of land and 37.39% have insured the cropped area of 1 and 2 hectare. Majority of the total sample farmers were either marginal farmers (48.66%) or small farmers (35.29%). The medium farmers were 12.84% and large farmers were 3.21%.

Cronbach's Alpha

Cronbach's Alpha reliability test was done to check the reliability of each dimension of Income stability, Loan Repayment, Future acceptance and financial security.

Table 2 Reliability Test

Reliability Statistics	
Cronbach's Alpha	No. of Items
.821	5

The alpha coefficient for the items is .821, suggesting that the variables have relatively high internal consistency. Since the calculated Cronbach's alpha values are higher than 0.7, the research can rely on the collected data for testing the research hypotheses.

Table 3: Correlations

Correlations					
		Income stability	Loan Repayment	Future acceptance	Financial security
Income stability	Pearson Correlation	1			
	Sig. (2-tailed)	0.00			
	N	115			
Loan Repayment	Pearson Correlation	.461*	1		
	Sig. (2-tailed)	.000			
	N	115	115		
Future acceptance	Pearson Correlation	.948*	.841**	1	
	Sig. (2-tailed)	.000	.000		
	N	115	115	115	
financial security	Pearson Correlation	.699*	.483**	.914**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	115	115	115	115
**. Correlation is significant at the 0.01 level (2-tailed).					

The above table 3 explains about the co-relation between the Income stability, Loan Repayment, Future acceptance and financial security. There is a positive correlation of 0.461 between Income stability and Loan Repayment. There is a strong and positive co-relation of 0.943 between Future acceptance and Income stability. A positive co-relation of 0.699 was found between financial security and Income stability.

Regression

Present research paper is attempting to find the factor influencing on purchase of e-vehicles. To measure the factors, the regression model is applied.

Table 4: Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.681	.837	.213	3.65523

The regression model summary shows that the R value is 0.681 and adjusted R square value is 0.837 (83%). This indicates that 21.3% of the effectiveness of the PMFBY among farmers explained by Income stability, Loan Repayment, Future acceptance and financial security. The result of ANOVA test is given below.

Table 5: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	293.294	4	199.714	117.873	0.000
	Residual	177.561	125	2.913		
	Total	470.855	129			

The ANOVA table shows the fitness of the model. The calculated F value (117.873) from the ANOVA test shows fitness of the model ($p < 0.000$). The significance values are less than 0.05. Hence, the null hypothesis is rejected. Study concluded that the factors i.e., Income stability, Loan Repayment, Future acceptance and financial security are significantly influence on the PMFBY among farmers in Tumkuru and Ramanagara districts.

Constraints faced by farmers in getting the benefits of Pradhan Mantri Fasal Bima Yojana

- Low awareness about PMFBY
- Lack of awareness about other related government schemes
- Lack of communication with others farmers
- Banks are far away from residence of farmers
- Non availability of insurance agents
- Local government staff did not popularize the scheme
- Government staff do not talk directly to the farmers
- Unavailability of surveyor at crop loss time
- Insufficient coordination and linkage between banks and farmers
- Unavailability of source for doubt clarification
- Unavailability of reporting authority at the time of crop loss
- Proper technical guidance is not provided by the some officers about PMFBY

Pradhan Mantri Fasal Bima Yojana (PMFBY) is a crop insurance scheme which envisages an efficient insurance support for farmers of the country. PMFBY aims at supporting sustainable production in agriculture sector by:

- Providing financial support to farmers suffering crop loss/ damage arising out of unforeseen events
- Stabilising the income of farmers to ensure their continuance in farming
- Encouraging farmers to adopt innovative and modern agricultural practices
- Ensuring flow of credit to the agriculture sector The priority programme contributes to food security, crop diversification and enhancing growth and competitiveness of agriculture sector, besides protecting farmers from production risks.
- Kisan Melas, Farmer Goshthis and fortnight campaigns may be organised by the District Administration to publicise PMFBY.
- Farmers should be made aware of the cut-off dates of Kharif and Rabi insurance timelines under the scheme by distribution of calendars, regular village meetings, helpdesks at village centres and CSCs, etc.
- Mobile vans and all types of media, social, electronic and print may be leveraged to create awareness.
- Zero balance accounts can be opened in cooperative banks to bring non-loanee and loanee farmers in the cooperative fold for speedy premium collection and claim amount distribution.
- Additionally, Primary Agriculture Credit Societies (PACS) are involved as they have grassroot connectivity and are working as agencies for insurance companies.
- Policy interventions by districts to accommodate the needs and requirements of farmers such as keeping banks open on holidays and Sundays close to the cut-off date.
- District Level Monitoring Committee (DLMC) has been actively monitoring in many districts and they meet at regular intervals to discuss the progress of the scheme implementation.

- Implementation of the scheme also saw Aadhaar authentication, linkage to Jan Dhan Account and transfer of claim directly to beneficiary's account by Direct Benefit Transfer (DBT).
- Transparency should be made by steps like presence of both Village Level Workers (VLW) and Insurance Company representative in West Tripura during processing of application and assessment of crop damage.
- Grievance Redressal mechanism should be in place. Redressal of complaints may be done directly via WhatsApp groups, call centres, Toll free call numbers and weekly/ monthly meetings with all the stakeholders.

Conclusion

The study revealed the farmers have taken crop loan depending on their income. It was found that loan status of the farmers influence the decision of taking crop insurance. The studies found that crop insurance have helped farmers in repayment of loan. The study reveals that most of the beneficiaries had favorable attitude towards the scheme. Therefore, extension personnel should focus on Pavagada, Sira, Kanakapura and Channapattana taluks in Tumkuru and Ramanagara districts of Karnataka for providing required information on the scheme to farmers. The premium of the (PMFBY) Pradhan Mantri Fasal Bima Yojana is comparatively more than (WBCIS) Weather based Crop Insurance Scheme (PMFBY) Pradhan Mantri Fasal Bima Yojana provides more benefits compared to any other schemes It was found that majority of the farmers were satisfied with the currently available crop insurance schemes and would suggest to their friends and relatives Crop insurance provides protection to farmers against crop loss. (Hamshini et al 2019). Creation of separate PMFBY cell at village and block level, more advertisement on the scheme helps to reap the benefits by majority farmers. So, that they safeguard their crop and also prevent their crop losses from the unforeseen situations.

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