Exercise and Acknowledgment of Pradhan Mantri Fasal Bima Yojana among the Farmers of Coimbatore

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Abstract: There is reason for concern regarding the regional disparities in India's agriculture sector. In light of this, the government has implemented crop insurance to shield farmers from production risk resulting from unfavorable weather. Numerous risks are associated with the farming industry, including those related to weather, prices, yields, government regulations, international market conditions, and other variables that affect farmers' earnings. The Pradhan Mantri Fasal Bima Yojana, a sort of "One Nation-One Scheme" that was introduced in2016, is the most recent program. In addition to helping to stabilize the insured farmers' income, PMFBY offers a broad insurance coverage against crop failure. The Pradhan Mantri Fasal Bima Yojana (PMFBY) crop insurance program is evaluated in terms of geography in the Tamil Nadu district of Coimbatore. The primary survey used as the basis for the research study examined crop insurance holders' awareness levels. 110 respondents made up the sample for the questionnaire-based study. Chi-square testing and basic percentage analysis were used to examine the outcomes.

Key Words: Crop Insurance, Risk, Farmers, Pradhan Mantri Fasal Bima Yojana, awareness level.

1. INTRODUCTION :

Farmers can manage risks resulting from erratic natural phenomena by using crop insurance, which serves as a vital safety net. It effectively mitigates the financial losses incurred by a small number of people as a result of unfavorable weather, pests, illnesses, and natural disasters by combining modest contributions from a large number of people. Farmers are guaranteed indemnity in the event that their yields fall short of predetermined levels by paying premiums based on crop income or expenses. From the pre-sowing to the post-harvest phases of the cropping cycle, this extensive program protects against a variety of obstacles. Its primary objectives are to facilitate prompt claim settlements and lessen the financial burden of insurance premiums on farmers, supporting their long-term financial stability and adaptability to unforeseen circumstances.

India is experiencing a serious agrarian crisis that is causing hardship for the farming industry. The crisis is characterized by factors like growing debt, crop failures, and low returns on cultivation costs. Unsettlingly, the National Crime Record Bureau's data shows that farmer suicides increased by 41.7 percent in 2015 compared to 2014. The primary causes of the increase were debt and subpar crop yields. The situation is made worse by climate change, which makes extreme and unseasonal weather events more frequent. The Indian government replaced the National Agricultural Insurance Scheme (NAIS) and the Modified National Agricultural Insurance Scheme (MNAIS) with the Pradhan Mantri Fasal Bima Yojana (PMFBY) as its flagship program in order to address these issues. The state government decides whether to implement PMFBY and the Weather-Based Crop Insurance Scheme (WBCIS), though both continue. Over the next three years, PMFBY seeks to reduce the cost of crop insurance for farmers and cover almost half of the country's cultivated land. For various crop types, farmers pay premiums under PMFBY that range from 1.5 to 5 percent; the

government pays the remaining amount. Founded in 2016, PMFBY uses technology to expedite insurance procedures and guarantee timely claim payments, giving farmers in need of financial assistance vital support.

The Pradhan Mantri Fasal Bima Yojana, or PMFBY, was announced by the central government to lessen the financial burden of premium payments for agricultural insurance. On January 13, 2016, the Indian government introduced PMFBY, a technology-based crop insurance program, with the intention of providing farmers with direct benefits through Direct Benefit Transfer (DBT). Additionally, the program will give farmers financial support to aid in their recovery from crop losses. Furthermore, the program will assist farmers in quickly and easily resolving policy claims without a lot of bureaucratic red tape.

2. OVERVIEW OF PMFBY IN TAMILNADU :

Farmers and Crops Covered by PMFBY: The government has made great efforts to guarantee that a wide variety of farmers are included in the PMFBY insurance program. This consists of both required and optional parts, with quotas set aside for farmers who fall under the SC, ST, or OBC categories. Farmers without previous agricultural loans can choose to participate in the mandatory segment, but those who have benefited from seasonal crop cultivation loans (SAO credit) are automatically enrolled. Furthermore, a list of crops that qualify for PMFBY coverage has been provided by the government. This list includes both food and commercial crops like wheat, barley, rice, lentils, and different fruits.

Overview of Tamil Nadu's PMFBY: Since the Kharif season of 2016, PMFBY has been widely implemented in all districts of Tamil Nadu, with the exception of Chennai. A considerable number of farmers have profited from compensation claims totaling Rs. 210 Crore for crops grown between 2016–17 and 2019–20 over the years. The scheme covers horticulture crops in designated Firkas. Since the Kharif season of 2019–20, additional horticultural crops like bhendi, brinjal, cabbage, garlic, ginger, coriander, and tomato have been added to the scheme, along with annual crops like potato, onion, red chilies, tapioca, banana, and turmeric.

Farmers would consequently be more at risk. In this sense, crop insurance is crucial for protecting farmers against the effects of natural disasters. The Indian government launched the Prime Minister Crop Insurance Scheme, also known as the Pradhan Mantri Fasal Bima Yojana (PMFBY), on January 13, 2016. "It is a crop insurance program designed to support farmers, who are the backbone of the country, by offering insurance coverage to those who lose crops due to natural disasters. The program's sole goal is to support sustainable production in the agriculture sector." The success or failure of the Pradhan Mantri Fasal Bima Yojana is determined by the farmers' awareness of and attitude toward the program, as well as their relationship to it. The study shows how much of an impact it currently has on farmers' stability, risk-taking skills, and standard of living. Farmers' basic attitudes toward PMFBY can offer helpful suggestions for future planning and enhancements.

3. Research Objectives :

The Objectives of the study are

- To examine the Socio- Economic characteristics of the respondents.
- To study the purpose of utilization (Awareness) of the scheme.

4. Research Methodology :

The study is qualitative in nature, conducted in Coimbatore. The purpose of utilizing the scheme among the farmers is measured from 110 sample respondents (Questionnaire). The sample respondents are selected using convenient sampling.

5. Analysis, Findings & Result :

Socio Economic characteristics

The natural surroundings of the chosen farmers will have an impact on their mindset and conduct. We look at their age, the number of kids they have, their educational background, the makeup of their family, and their income level. The outcome is displayed in Table 1 below.

<div align="center">TABLE 1. Socio Economic Characteristics</div>

|		Respondents	Percentage
Gender	Male	78	70.90
	Female	32	29.09
Educational qualification	Illiterate	18	16.37
	Middle	49	44.54
	High school	28	25.45
	Intermediate	11	10
	Graduate	4	3.64
Age	18-30	19	17.27
	31-45	45	40.90
	Above 46	46	41.81
Marital status	Married	104	94.54
	Unmarried	6	5.45
Family Type	Joint Family	12	10.90
	Nuclear Family	98	89.09
Income level	Below 1,00,000	44	40
	1,00,000-2,00,000	53	48.18
	Above 2,00,000	13	11.81
Family Size	Below 5	25	22.72
	6-8	53	48.18
	More than 8	32	29.09

Interpretation:

The table shows that 78(70.90%) respondents are male and 32(29.09%) respondents are female. Out of 110 respondents 18(16.37) are illiterate, 49(44.54 %) respondents are have completed their middle level of education, some of respondents have completed their high school 28(25.45%), and 4(3.64 %) respondents are graduate. 19 (17.27 %) respondents are within the age group of 18-30 and highest respondents belongs to age group above 46 with 41.81%.

From the total respondents 104(94.54 %) respondents are married and the 6(5.45 %) respondents are unmarried. From the collected respondents most of the respondents belongs to Nuclear family with 98 (89.90%) respondents and the remaining respondents belongs to joint family with 12(10.90%). The highest level of income is between the respondents is 1,00,000-2,00,000 with 48.18%. and the family size of the respondents is highest with 48.18% which is in between 6-8.
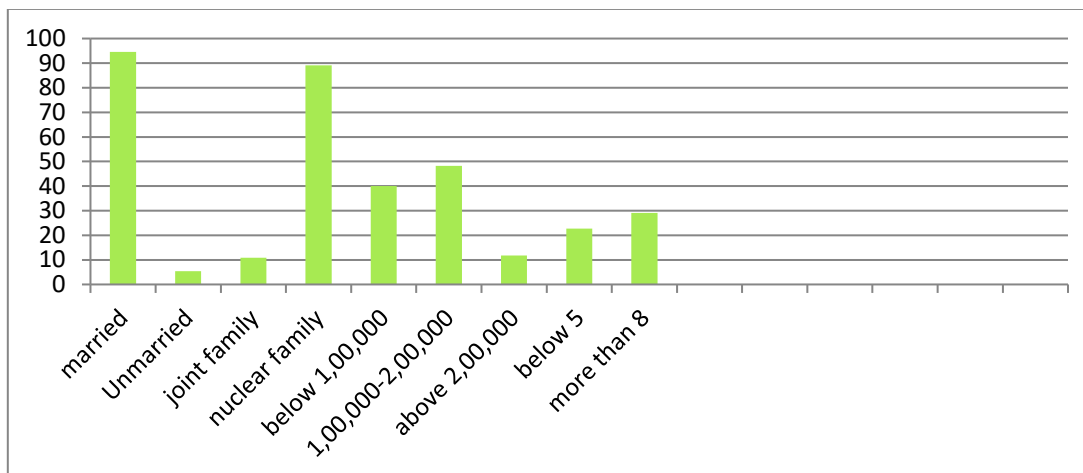
Graph showing socio economic characteristics

<div align="center">**Graph 1**</div>
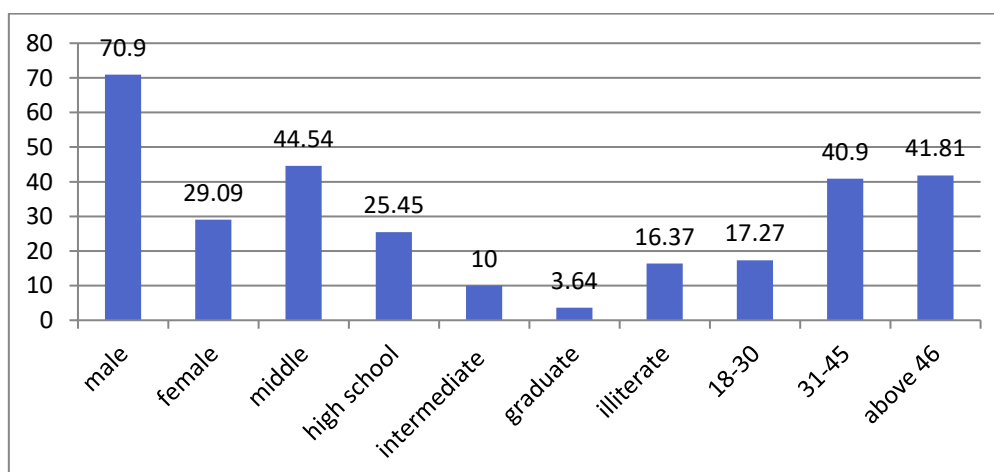
Graph 2

Awareness level among the farmers

Chi-Square Test

H_1 – There is a significant relationship between the age of farmers and their awareness

H_0- There is no significant relationship between the age of farmers and their awareness

Relationship between the Age of the respondents and their Awareness

Test	Chi-Square Value	Df	CC	Sig
Gender	5.79	3	0.215	0.124
Occupation	41.323	12	0.506	0.001
Education	52.974	12	0.553	0.000
Location	3.318	6	0.164	0.778
Marital Status	50.755	3	0.545	0.000
Family Status	2.960	3	0.155	0.398
Monthly Income	15.054	9	0.334	0.088

Df- Degree of freedom   **CC-** Contingency Coefficient   **Sig-** Significant level

Interpretation

Gender- The results from the above table show that the computed chi-square value (5.79) for the degree of freedom 3 is significantly higher than the expected value. Given that the contingency coefficient value is greater than 0.215, the p-value is 0.124 (>0.010). The theory is therefore accepted. It is concluded that respondents are growing more aware of the Scheme, irrespective of their gender.

Occupation -According to the above table's results, the computed chi-square value (41.323) for degree of freedom 12 is substantially greater than what was predicted. Since the value of the contingency coefficient exceeds 0.506, the p-value is 0.001 (<0.010). Consequently, the theory is disproved. It is concluded that the respondents' level of awareness of the scheme does not increase with their occupation.

Education Qualification- The computed chi-square value (52.974) for degree of freedom 12 is significantly higher than what was anticipated, based on the results shown in the above table. The p-value is 0.000 (<0.010) because the

contingency coefficient value is greater than 0.553. As a result, the theory is proven false. Their educational background indicates that the respondents are not more knowledgeable about the scheme.

Location- For degree of freedom 6, the computed chi-square value (3.318) is substantially higher than the expected value based on the data in the above table. As evidenced by the p-value of 0.778 (>0.010), the contingency coefficient value is greater than 0.164. Thus, the theory is acknowledged. The study concludes that, in terms of location, respondents are becoming increasingly aware of the scheme.

Marital status- - The results in the aforementioned table show that the computed chi-square value (50.755) for degree of freedom 3 is significantly higher than the value predicted. The contingency coefficient value exceeds 0.545, as indicated by the p-value of 0.000 (<0.010). This refutes the theory. In summary, the respondents' level of knowledge regarding the scheme is not higher for those who are married or not.

Family Status- For degree of freedom 3, the computed chi-square value (2.960) is significantly greater than the expected value based on the data in the table above. The contingency coefficient value exceeds 0.155, as indicated by a p-value of 0.398 (>0.010). Thus, the theory is recognized. The study discovers that respondents are becoming more aware of their family status and the scheme.

Monthly Income- Degree of freedom 9 has a computed chi-square value of 15.054, which is substantially higher than the value that would be expected based on the data in the above table. The contingency coefficient has a value greater than 0.334, as demonstrated by the p-value of 0.088 (>0.010). Consequently, it is recognized as a theory. The study participants' awareness of the scheme is increasing due to their monthly income

Independent Sample T test

H_1 – There is a significant relationship between the Gender of respondents and their awareness

H_0- There is no significant relationship between the Gender of respondents and their awareness

Relationship between the Gender of the respondents and their Awareness

		Awareness on the scheme		
		Mean	SD	N
Respondents	**Male**	2.25	0.60	48
	Female	2.11	0.545	72

Mean difference between gender and the awareness on the Scheme

T	Df	Sig.	Result
1.312	118	0.027	Not significant

Interpretation

According to the results of the independent t test, the mean difference between the respondents' gender and their awareness of food delivery was not statistically proven, with t (df =118) =1.312, sig.0.027, not exceeding the table value (p<1.96) at the 5% level. The null hypothesis is accepted since there is no evidence of a significant difference between the predictor and outcome variables.

6. CONCLUSION :

One creative suggestion to improve the efficacy of the National Disaster Management Authority's emergency alert system is to use its framework for more general public awareness campaigns that focus on farmers. The proposal is to use the same mechanism—which was inspired by the recent emergency alert tests—to inform farmers about important government   schemes.

Through the implementation of this strategy, the Agriculture Department can guarantee that farmers receive critical information in an effective and timely manner. According to the proposal, all farmers' registered mobile phones would receive alert messages accompanied by visually arresting sound cues. To guarantee that the recipient hears the message as much as possible, the sound will continue until they interact with the scheme.

This proactive approach offers a creative way to close the awareness and communication gap among farmers, and it also fits with the government's mission to use technology for the benefit of the public. The implementation of programs like the Pradhan Mantri Fasal Bima Yojana can be greatly improved by using the current emergency alert system for more comprehensive educational goals, which will ultimately result in more inclusive and successful policy outcomes.

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