

Farmers Attitude towards New Crop Insurance Scheme (PMFBY)

[A Study of Sanghi Village of Rohtak District in Haryana, India]

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Abstract

Present study aims at finding the effectiveness of new crop insurance scheme launched by Government in India, particularly at a village Sanghi in Rohtak district of Haryana. Success of any program depends upon the active participation of all stakeholders therein but how the Indian farmers take it, is ambiguous. Hence, the present study is an attempt to explore the perceptions and attitude of people engaged in agri business. Study is descriptive in nature which went through primary data collection via getting the questionnaire filled up from 100 households chosen on the basis of purposive sampling, making the content analysis using mean value index and testing the validity of results with the help of F-values to ensure the generalization of outcome. Study finds the majority of people aware of this scheme and thinking upon it rationally but their policy buying decisions are affected by multiple factors of which peer's influence is significant one.

Key Words: Agriculture, Risk, Crop Insurance, Farmers.

INTRODUCTION

The field of agriculture has been full of uncertainties in terms of yield as well as price volatility where a single natural calamity puts the farmers in a pitiable condition (O'Brien et al, 2004) but announcement of PMFBY by Finance Minister Arun Jaitley in his budget speech (2016-17) seems to be a big changer for the life of Indian farmers. No doubt agriculture is a very risky venture and practically, a larger insurance premium would cover more risks. But, it is necessary to opt for optimum insurance (Bastian, 1999). It is a biggest attempt of Govt of India taken ever in de-risking this sector but it strikes the minds of researchers and throws a big question – could it be effectively implemented at ground level? Need of answer this question initiates the researcher to make a study on this topic. No doubt it is being taken a big move of Government to mitigate a big part of agri-risk, Agri minister Radha Mohan has called it a “Amrit Yojna” which also covers the post-harvest and localised crop losses like hailstones.

As we know that a major part of Haryana is a rural economy based on agriculture and village Sanghi of Rohtak district has always been active participatory in various fields such as politics, education, social issues etc. Thus researcher finds it interesting to know the attitude of the people residing in this village towards new crop

insurance scheme named Pradhan Mantri Fasal Bima Yojna. PMFBY mitigates the yield risk against the natural calamity which is attempt to transfer the anticipatory loss of agriculturists with the least premium offer (2% for kharif crops and 1.5% for ruby crops and 5% for horticulture & commercial crops) of all earlier crop insurance plans or programmes. It is also notable that today around 23% area of crops is insured under either of NAIS or MNAIS whereas new crop insurance plan targets to reach the level of 50%. **LITERATURE REVIEW**

Vast literature is available on insurance but on crop insurance it is limited of which few studies are as under:

Mamata Swain (2014) made a study on crop insurance for adoption to climate change in India analyzing the performance of NAIS and WBCIS on the basis of secondary data in the state of Odisha the climate change hot spot of India and revealed the WBCIS as a better plan than NIAS but it covers only losses of climate uncertainties.

Sabina Yasmin & C. Hazarika (2015) stated in his study that people of Kamrup village of Assam are very illiterate and not much aware of crop insurance scheme named Modified National Agricultural Insurance Scheme (MNAIS) which mark the scheme failed.

Mukesh. H.V (2015) revealed that the factors like access to loan, education, off-farm income, and region (based on nature of irrigation) in which a farmer is located have significantly influenced the adoption of crop insurance. Moreover, landholding-size, whether insured or non-insured, has depicted a positive influence on the income of farmers.

Tao Ye & Yangbin Liu (2016) carried out a survey of data for paddy rice farmers in Hunan Province, China. It shows that the sampled farmers' crop insurance perception was surprisingly low despite years of pilot programs and tens of billions of expenditure in government subsidies. The result of simultaneous equations model indicates that crop insurance perception and participation are simultaneously determined and mutually improving.

Being the agriculture a low profit potential has been unable to find attention from business point of view that's why only few studies have been made thereon and further different scholars with different outcome could not provide a uniform solution to reduce or transfer the risk involved therein which provides the scope to choose this subject for the purpose of study and bridges the gap lying in the literature.

OBJECTIVES OF THE STUDY

Present study focuses on analyzing the new crop insurance plan (PMFBY) in terms of farmers' view, perception and reaction.

RESEARCH METHODOLOGY

Target Population: Total number of 1705 families with the population of 9108 of which 4889 are males and 4229 are females as per census 2011 are living in the Sanghi village.

Sampling: 100 households have been chosen for the purpose of study where a household represents the collective opinion of a family determined on the basis of majority of the members thereof. Survey contains respondents' demographic as well as agricultural information, risk perceptions & management and rating to PMFBM.

Parameters of the Study: Five factors/ variables i.e. Education, Risk Management, Buying Decision, Perceived Premium and Perceived Value have been taken as parameters of the study to determine attitude of farmers towards PMFBY which further have been classified into different statements to get them rated by respondents at five point rating scale i.e. Strongly Agree, Agree, Indifferent, Disagree and Strongly Disagree. Further weights have also been given to each statement to include the subjective assessment of the researcher and reach the more concrete results. **Table I: Parameters of the stated variables**

Variables	Code	Statements
Education/ Awareness	E ₁	I know about the Pradhan Mantri Fasal Bima Yojna.
	E ₂	Government campaign for raising the awareness of new crop insurance plan is satisfactory.
	E ₃	I am skilled in managing yield risk of my crop.
	E ₄	I disseminate my view on new crop insurance plan to others.
Perceived Risk	PR ₁	Agri-business is very risky and Agriculturists are risk averse.
	PR ₂	Probability of variation in personal yield from country yield is high.
	PR ₃	There is a lack of risk management tools available in India. NAIS, MNAIS, WBCIS and all other previous crop plans were not proved good.
	PR ₄	PMFBY is able to mitigate the yield risk absolutely.
Perceived Influence	PI ₁	I take my policy decision at my own rationality.
	PI ₂	I prefer the advice of my friends and peers on purchasing the policy.
	PI ₃	Premium is major concern in buying the policy.
	PI ₄	I prefer to follow the advice of experts to invest in Risky Market Instrument.
Perceived Premium	PP ₁	Premium to be charged under new crop plan is reasonable.
	PP ₂	Variation in premium of different kinds of crops is justified.
	PP ₃	Time interval of premium is appropriate
	PP ₄	More premium covers more risk.
Perceived Value	PV ₁	PMFBY indemnifies the fair value of loss to farmers.
	PV ₂	New plan provides the ease of getting claim.
	PV ₃	Claim settlement process is transparent.
	PV ₄	Probability of recovery of compensation is fast.

Tools & Model Framework

Farmers' attitude has been measured in terms of their preference and factors affecting their perceptions which have been analyzed at two levels:

- **Ascertaining the level of effectiveness for individual parameters.**

The scores for the parameter are derived by multiplying the number of respondents with the respective score and its subsequent summing. Effectiveness index was calculated by applying the formula:

$$\frac{\text{Actual scores obtained for the statement} \times 100}{\text{Maximum obtainable score for the statement}}$$

- **The overall effectiveness Index is calculated by using the formula:**

$$\frac{\text{Top scores obtained for the seven parameters} \times 100}{\text{Sum of maximum scores obtainable for seven parameters}}$$

Overall index is taken as benchmark

Hypotheses: Following null hypotheses have been set regarding all stated variables:

H₁: Awareness has no impact on farmers' attitude towards PMFBY.

H₂: Perceived Risk has no impact on farmers' attitude towards PMFBY.

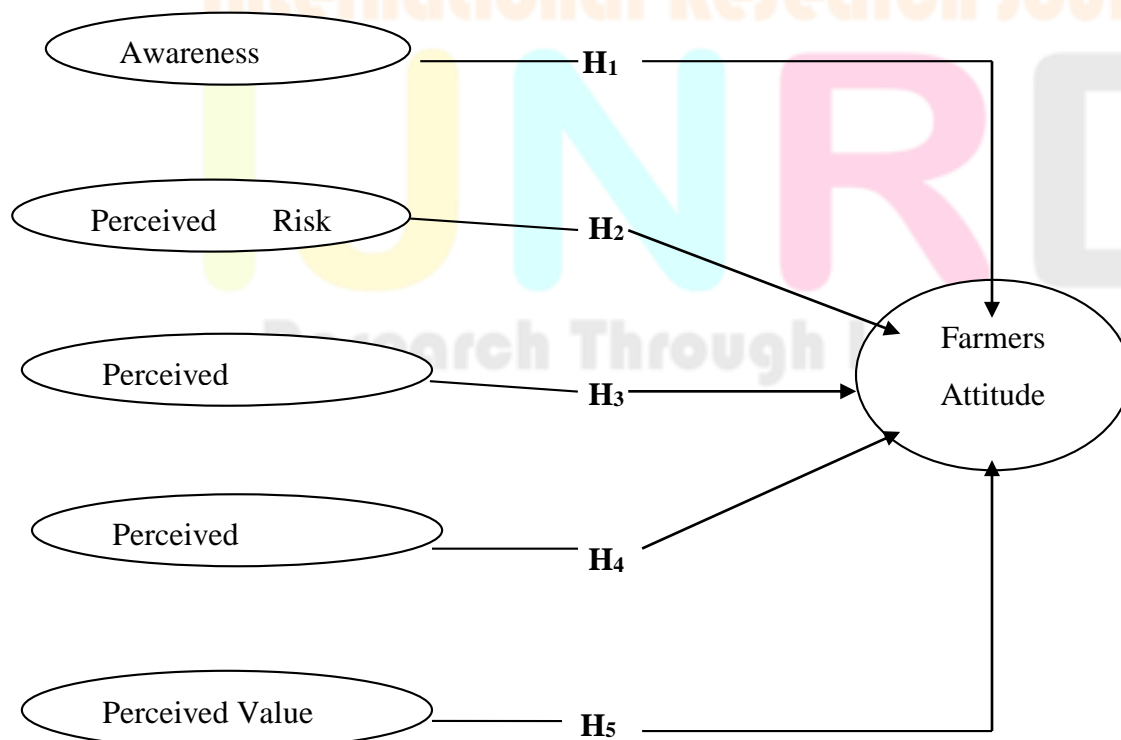
H₃: Perceived Influence has no impact on farmers' attitude towards PMFBY.

H₄: Perceived Risk has no impact on farmers' attitude towards PMFBY.

H₅: Perceived Value has no impact on farmers' attitude towards PMFBY.

Following research model given in figure 1, has been developed to achieve the objectives of the study:-

Figure 1: Research Model



Where; Farmers Attitude is a dependent variable and Education, perceived Risk, Buying Decision, Perceived Premium and Perceived Value are independent variables. These five independent variables have been taken as determinants of intension to adopt the Pradhan Mantri Fasal Bima Yojna.

RESULTS & DISCUSSIONS

Results are to be discussed into two parts:

1. Parameter wise Analysis
2. Overall Analysis
3. Hypothesis Testing

1. Parameter wise Analysis: As selection of crop insurance scheme depends upon the various factors but here major 5 factors have been taken into account, in which so many other sub factors have been comprised of. Scores were gathered through survey at point rating scale and has been analyzed in table 2

Table 2: Parameter wise Farmers' Attitude

S	Factors/ N Variables	Strongly Agree	Agree	Not Agree	Disagree	Strongly Disagree	Mean Scores	Mean Index	
1	Education/ Awareness	29	32	26	5	8	456	81	
2	Perceived Risk	35	27	25	7	6	479	86	
3	Perceived Influence	33	25	27	8	7	453	81	
4	Perceived Premium	32	24	27	10	7	451	81	
5	Perceived Value	33	30	22	10	3	470	84	
	Overall Mean Index							2758	83

Table2 highlights that mean indices of two factors i.e. perceived risk and perceived value are 86 and 84 respectively that indicates that these are most influential factors in farmers attitude to PMFBY whereas other factors have almost similar scores in mean index that indicates their less consideration in adoption of crop insurance plan. This doesn't mean that except of two major factors don't affect the farmers' perceptions, as overall mean index is 83 and all variables' mean indices are near about this value, so they also have the impact on farmers' attitude. So all stated variables are determinants of farmers attitude of Sanghi village at Rohtak District in Haryana.

2. Overall Analysis (Correlation Analysis):

Table 3 shows the Pearson Correlation Analysis among all stated variables. Most of the correlations are significant.

Table 3: Pearson Correlation between Latent Variable

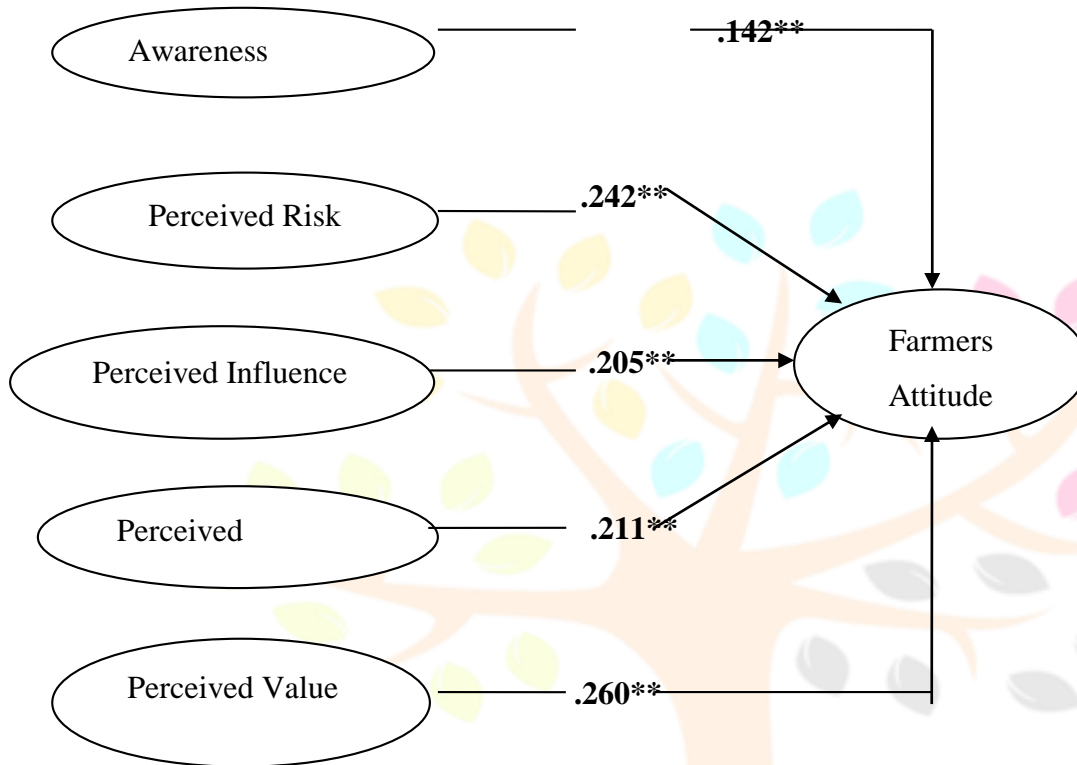
	EA	PR	PE	PP	PV
EA	1	0.109	0.035	0.187*	0.385**
PR	0.109	1	0.274**	0.004	-0.145
PE	0.035	0.275**	1	0.177*	0.191
PP	0.187*	0.004	0.177*	1	0.289**
PV	0.385**	0.125	0.191*	0.289**	1
*: Correlation is significant at the 0.05 level (2-tailed).					
**: Correlation is significant at the 0.01 level (2-tailed).					

With the integration of finance and psychological theories, it has been found that most of the stated variables i.e. awareness, perceived risk, perceived influence, perceived premium and perceived value are significantly correlated. Furthermore degree of correlation between awareness and perceived value of PMFBY is highest i.e. 0.385 whereas awareness and perceived risk are not found significantly correlated. Between risk and premium least amount of correlation has been traced.

Hypotheses Testing

Hypotheses have been tested with the help of regression results as shown in following figure;

Figure 2: Results of Hypotheses Tests (H1 to H5)



The values shown in figure2 are regression coefficients of stated variables which all are significant at 0.01 as well as .05 level which confirms that farmers attitude towards PMFBY is dependent on awareness, risk, others actions & decisions, premium and value creation of policy.

CONCLUSION

Study found the crop insurance to absorb the production risk effectively, encouraging the farmers to concentrate on a fewer number of profitable crops instead of spreading their resources and energy across many crops. In this way, it has acted as an incentive for specialization in agriculture. The crop insurance scheme has led to the use of high-value inputs like seed, fertilizer and plant protection chemicals. The insured farmers have realized more returns than their non-insured counterparts.

Farmers face constraints like tedious and time consuming procedure, non-availability of crop loan, lack of motivation and information from officials, etc. On the other hand, the agencies implementing crop insurance expressed that lack of staff, lack of coordination among them and hindrance to their routine functions were the major constraints.

Moreover, empirical evidence indicates that the impact of crop insurance participation on perception is slightly stronger than that of perception on participation, and thus provides weak evidence of a 'learning-by-doing' stage

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ABBREVIATIONS

PMFBY: Pradhan Mantri Fasal Bima Yojna

NAIS: National Agricultural Insurance Scheme

MNAIS: Modified National Agricultural Insurance Scheme

WBCIS: Weather Based Crop Insurance Scheme