

Evaluation of the Role of Micro and Crop Insurance Products in the Development of Farmers of Bhandara District of Maharashtra

Ms. Neelam Gotmare*
Dr. Rajvilas Karmore**

Micro-insurance plays a significant role in rural development by providing financial protection to low-income individuals and communities in rural areas. Micro-insurance helps mitigate risks, such as crop failure, livestock mortality, health emergencies, and natural disasters, faced by the rural population. By providing insurance coverage against these risks, micro-insurance ensures that rural households are not pushed further into poverty due to unexpected events. However, often the financial systems that are in place do not function promptly and efficiently so that the intended beneficiaries are unable to avail the benefits of various micro-insurance and crop insurance products. This has been and continues to be the situation in many regions of India, and Bhandara District of Maharashtra State is not an exception. Hence, this study was carried out to determine the role of micro and crop insurance products with respect to the development of farmers of Bhandara District adopting the standard research methodology. The descriptive research design and survey methodologies were used to collect data from insurance agents working in the study area. The data meticulously collected was studiously analyzed using various statistical tests with the aid of SPSS 18.0 software. The results indicated that most of the insurance agents in the area work with both government and private insurance companies and prefer to provide information (about micro-insurance and crop insurance products) to the farmers through personal interactions. The results also indicated that most of the farmers of the selected study region have favorable attitude towards micro and crop insurance products. Though micro-insurance and crop insurance have provided the farmers some financial stability, their premium payments are often irregular. Most of the respondents revealed that the currently available micro and crop insurance products are sufficient to mitigate the manifold risks faced by the farmers only up to a limited extent.

* Research Scholar, Email: neelamgotmare2@gmail.com

** Associate Professor, Vidya vikas Arts, Commerce and Science College, Wardha
Email: rajvilaskarmore@gmail.com

1. Introduction

Micro insurance products are designed to protect low-income individuals and families that need more conventional insurance policies. The micro insurance companies currently offer various types of risk coverages, such as life, health and crop insurance. These are made available at comparatively lower costs than the typical insurance policies (Mookerjee et al., 2014). This is to ensure that financial protection is provided to farmers who otherwise cannot afford to have access to such insurance products. The target population or customers for such insurance schemes mainly comprise individuals or families generally not given attention to, or simply overlooked, by bigger commercial insurance companies (Tiwari et al., 2020). These micro insurance policies are designed for the people who earn less than Rs 400 (\$4) a day. This micro-insurance market consists of insurance agents, micro-finance lenders, non-governmental organizations and various community self-help groups (Cariappa et al., 2021).

Although the roles of each of the above-mentioned stakeholders are important for sustainable development of the rural agrarian economy, the tasks performed by the insurance agents is arguably the most challenging one as they have to work as a bridge between lenders and customers (Asmare & Worku, 2018). There are multiple types of micro insurance products that are offered by the micro insurance companies. These products are focused on health or life of the insurer, or natural disasters, non-natural disasters (fire, theft, and socio-economic liabilities), crop micro insurance (Da Costa, 2013). Developing countries like India, or those that are disaster-prone, have formulated systems and structures to support/mitigate disaster management activities (Sarangi & Panigrahi, 2016). However, all these policies to cover the various types of risks are not utilized fully by the potential beneficiaries (Sundar & Ramakrishnan, 2015). Hence, a focused study was needed to evaluate the role of micro and crop insurance products exclusively for the amelioration of small Indian farmers in general, and particularly those from Bhandara District of Maharashtra.

2. Research Methodology

This study is significant from the point of view of evaluating the role of micro and crop insurance products, vis-à-vis development of farmers of the selected study area, i.e. Bhandara District of Maharashtra. The study was conducted by adopting a descriptive

research design, and the survey methodology was used to collect data from the respondents. The data was collected from the insurance agents working in the study-area. For the purpose of data collection, a structured research instrument, i.e. a questionnaire, was developed and administered to the respondents. Prior to its use, the reliability and validity of the questionnaire was tested by conducting a pilot study.

The secondary data was collected from published research literature and related websites and also gleaned from primary data source. Based on the preliminary survey, a sample size of 70 respondents was considered to be appropriate, and, the selection of insurance agents for the purpose of data collection was done applying the stratified random sampling technique. The entire data collected was analyzed using various statistical tests with the aid of 'SPSS 18.0' software. The statistical tests included descriptive statistical tests (frequency, percentage and mode) and inferential statistical test such as Chi-Square test. The confidence interval was set at 0.05 level.

3. Data Analysis and Interpretation

3.1 Working experience

Table 1: Status of working experience of respondents of Bhandara District

<i>Experience</i>	<i>No.</i>	<i>Percentage</i>
<5 years	7	10.0
5 to 10	13	18.6
10 to 15	28	40.0
15 to 20	8	11.4
> 20	14	20.0
Total	70	100.0

$$\chi^2 = 20.143; \text{df: } 4; \chi^2_{\text{crit}} = 9.49; p < 0.05$$

Table 1 presents the results pertaining to the insurance agents' working experience in Bhandara district. The analyzed data reveals that 10% of the respondents have a working experience of <5 years, while 18.6% have 5 to 10 years of experience. Moreover, 40% and 11.4% of the respondents have 10 to 15 years and 15 to 20 years of working experience respectively. Furthermore, 20% of the respondents have working experience of more than 20 years.

3.2 Primary attachment with the type of insurance company

Table 2: Primary attachment of the respondents with the type of insurance company

<i>Type of Company</i>	<i>No.</i>	<i>Percentage</i>
Government	2	2.9
Private	6	8.6
Both	49	70.0
No preference	13	18.6
Total	70	100.0

$$\chi^2 = 79.143; \text{df: } 3; \chi^2_{\text{crit}} = 7.82; p < 0.05$$

Table 2 gives the primary employment of the insurance agents with the type of insurance company. The data shows that 2.9% of the respondents are attached to a government insurance company, while 8.6% of the respondents are employed with various private insurance companies. Interestingly, 70% of the respondents work with both types of companies and 18.6% of the respondents have no preference.

3.3 Method used for providing micro and crop insurance product information

Table 3: Method of providing information about micro and crop insurance products to the farmers

<i>Attribute</i>	<i>No.</i>	<i>Percentage</i>
Through personal interaction	43	61.4
By providing literature	8	11.4
Through Grampanchayat	14	20.0
Not involved in product promotion	5	7.1
Total	70	100.0

$$\chi^2 = 51.943; \text{df: } 3; \chi^2_{\text{crit}} = 7.82; p < 0.05$$

Table 3 shows the method of providing information about micro and crop insurance products to the farmers by the insurance agents. The data shows that 61.4% of the respondents provide information to the farmers through personal interactions, while 11.4% of the respondents provide printed information to the farmers. Moreover, 20% of the respondents provide information through Grampanchayat outlets and 7.1% of the respondents are not involved in promoting any product publicity.

3.4 Attitude of farmers towards micro and crop insurance products

Table 4: Opinion about attitude of farmers towards micro and crop insurance products

<i>Response</i>	<i>No.</i>	<i>Percentage</i>
Favorable	33	47.1
Unfavorable	23	32.9
Indifferent	14	20.0
Total	70	100.0

$$\chi^2 = 7.744; \text{df: } 2; \chi^2_{\text{crit}} = 5.99; p < 0.05$$

Table 4 presents the opinion of the insurance agents about the general attitude of farmers of the study region towards micro and crop insurance products. The data shows that 47.1% of the respondent farmers of the region have favorable attitude towards micro and crop insurance products, while 32.9% have unfavorable attitude. Moreover, 20% of the respondents feel that farmers of the region show an indifferent attitude.

3.5 Frequency of purchasing micro and crop insurance products per year

Table 5: Frequency of purchasing micro and crop insurance products every year by the farmers

<i>Frequency</i>	<i>No.</i>	<i>Percentage</i>
Never	16	22.9
Rarely	29	41.4
Occasionally	14	20.0
Always	11	15.7
Total	70	100.0

$$\chi^2 = 10.8; \text{df: } 3; \chi^2_{\text{crit}} = 7.82; p < 0.05$$

Table 5 indicates the opinions of the insurance agents about the frequency and continuity of purchasing micro and crop insurance products every year by the farmers. The data shows that 22.9% of the respondent farmers of the region neither purchase nor continue to purchase micro and crop insurance products every year, while 41.4% of the respondents rarely purchase the products. However, 20% of the respondent farmers purchase these products occasionally and 15.7% purchase the products every year.

3.6 Premium payment of insurance products by farmers during last five years

Table 6: Premium payment of micro and crop insurance products during last five years

Status of payment	<i>No.</i>	<i>Percentage</i>
Regular	6	8.6
Irregular	47	67.1
Don't know	17	24.3
Total	70	100.0

$$\chi^2 = 38.606; \text{df: } 2; \chi^2_{\text{crit}} = 5.99; p < 0.05$$

Table 6 provides the information pertaining to the premium payment for the various micro and crop products. The data shows that 8.6% of the farmers have regularly made the payments for micro and crop insurance premiums during last five years, while 24.3% of the respondents are not sure about it. Moreover, 67.1% of the respondents have made irregular insurance premium payments during the last five years.

3.7 Micro and crop insurance products have given financial stability to farmers

Table 7: Respondents' opinions about micro and crop insurance products that have given financial stability

<i>Financial stability</i>	<i>No.</i>	<i>Percentage</i>
To a large extent	24	34.3
Somewhat	39	55.7
Not at all	7	10.0
Total	70	100.0

$$\chi^2 = 21.975; \text{df: } 2; \chi^2_{\text{crit}} = 5.99; p < 0.05$$

Table 7 gives the opinions of the insurance agents about micro and crop insurance products that have contributed to the financial stability of the region. The data shows that 34.3% of the respondents are of the opinion that micro and crop insurance products have given financial stability to a large extent, while 55.7% feel that it has given financial stability only to a limited extent. Moreover, 10% of the respondents say that insurance products have not given any financial security to the farmers.

3.8 Preference to insurance cover

Table 8: Insurance cover preferred by farmers

<i>Insurance cover</i>	<i>No.</i>	<i>Percentage</i>
Individual	22	31.4
Group cover	48	68.6
Total	70	100.0

$$9.657; \text{df: } 1; \chi^2_{\text{crit}} = 3.84; p < 0.05$$

Table 8 presents the information pertaining to the insurance cover preferred by the farmers of the region. The data shows that 31.4% of the respondents prefer individual insurance cover, while 68.6% of the respondents prefer group cover.

3.9 Micro and crop insurance products are sufficient to mitigate various risks

Table 9: Currently available micro and crop insurance products that are sufficient to mitigate various types of risks

<i>Available product</i>	<i>No.</i>	<i>Percentage</i>
To a large extent	22	31.4
Somewhat	45	64.3
Not at all	3	4.3
Total	70	100.0

$$\chi^2=37.92; \text{df: } 2; \chi^2_{\text{crit}}= 5.99; p<0.05$$

Table 9 gives the opinions of the insurance agents about the current availability of micro and crop insurance products that are sufficient to mitigate the various types of risks. The data shows that 31.4% of the respondents are of the opinion that currently available micro and crop insurance products are sufficient to mitigate the various types of risks up to a large extent, while 4.3% do not feel that it is sufficient. But 64.3% of the respondents opine that the currently available micro and crop insurance products are sufficient to mitigate the various types of risks only up to a limited extent.

3.10 Claim settlement ratio

Table 10: Claim-settlement ratio

<i>Claim-settlement ratio</i>	<i>No.</i>	<i>Percentage</i>
< 25%	0	0.0
25 to 50%	15	21.4
50 to 75%	49	70.0
75 to 100%	6	8.6
Total	70	100.0

$$\chi^2=82.114; \text{df: } 3; \chi^2_{\text{crit}}= 7.82; p<0.05$$

Table 10 shows the information pertaining to the claim-settlement ratio of the insurance.

The data shows that 21.4% of the respondents say that claim settlement ratio is 25 to 50%, while 70.0% stated that it is 50 to 75%. Moreover, according to 8.6% of the respondents opine that claim settlement ratio is 75 to 100%.

3.11 Crop insurance has improved the feasibility of sustainable farming

Table 11: Crop insurance improved feasibility of sustainable farming

<i>Feasibility</i>	<i>No.</i>	<i>Percentage</i>
To a large extent	52	74.3
To a small extent	18	25.7
Not at all	0	0.0
Total	70	100.0

$$\chi^2=59.78; \text{df: } 2; \chi^2_{\text{crit}}= 5.99; p<0.05$$

Table 11 gives the agents' opinions as to whether crop insurance has improved the feasibility of sustainable farming. The data shows that 74.3% of the respondents say that crop insurance has improved the feasibility of sustainable farming up to a great extent, while 25.7% respondents are of the opinion that crop insurance has improved the feasibility of sustainable farming only up to limited extent.

4. Conclusions

From this timely research study results of the various aspects of the “Role of the Micro and Crop Insurance Products in the Development of the Farmers of Bhandara District of Maharashtra”, the following conclusions have been drawn with regard to :

4.1 Working experience

- Most ($p<0.05$) of the insurance agents have 10 to 15 years of working experience.

4.2 Primary attachment with the type of insurance company

- Most ($p<0.05$) of the insurance agents want to work with both government and private insurance companies.

4.3 Method of providing micro and crop insurance products information to farmers

- Most ($p < 0.05$) of the insurance agents provide information to the farmers through personal interactions.

4.4 Attitude of farmers towards micro and crop insurance products

- Most ($p < 0.05$) of the insurance agents feel that farmers of the selected study region have favorable and positive attitude towards micro and crop insurance products.

4.5 Frequency of purchasing micro and crop insurance products

- Most ($p < 0.05$) of the insurance agents feel that farmers rarely continue to purchase the micro and crop insurance products every year.

4.6 Premium payment of insurance products during the last five years

- Most ($p < 0.05$) of the farmers have made irregular payments of the insurance premium during the last five years.

4.7 Micro and crop insurance products have given financial stability to farmers

- Most ($p < 0.05$) of the insurance agents feel that micro and crop insurance products have given financial stability to farmers of the region up to a great extent.

4.8 Preference to Insurance cover

- Most ($p < 0.05$) of farmers prefer group insurance cover.

4.9 Micro and crop insurance products are sufficient to mitigate risks

- Most ($p < 0.05$) of insurance agents are of the opinion that micro and crop insurance products are sufficient to mitigate the various types of risks satisfactorily.

4.10 Claim settlement ratio

- Most ($p < 0.05$) of insurance agents observe the claim-settlement ratio is 50 to 75%.

4.11 Crop insurance has improved the feasibility of sustainable farming in the District

- Most ($p < 0.05$) of insurance agents claim that crop insurance has improved the feasibility of sustainable farming.

In view of the findings of this study, it is undeniable that micro-crop insurance has a positive impact on the economic development of the farmers since their risk is adequately managed through these insurance products. Moreover, the attitude of the farmers is favorable and positive towards various insurance products. However, many aspects are still not addressed adequately which result in various types of delays, i.e. in premium payments, and slowness in claim settlements. Hence, further studies are needed to identify the robust and proactive methods that can help in better risk management in agriculture sector. Also, this study shows that behavioral aspect of the micro and crop insurance customers plays a significant role in their opting for various insurance products.

5. References

- Asmare, A. & Worku, A. (2018), Determinants of micro-insurance demand in Jimma zone, *International Research Journal of Business Studies*, 11(3),145-57.
- Cariappa, A. A., Mahida, D. P., Lal, P. & Chandel, B. S. (2021), Correlates and impact of crop insurance in India: Evidence from a nationally representative survey, *Agricultural Finance Review*, 81(2), 204-21.
- Da Costa, D. (2013), The 'rule of experts' in making a dynamic micro-insurance industry in India, *Journal of Peasant Studies*, 40(5), 845-65.
- Mookerjee A., Clarke D., Grenham D., Sharpe J. and Stein D. (2014). Crop micro insurance: tackling poverty, one insurance policy at a time, *Annals of Actuarial Science*, 8(2), pp.253-280.
- Sarangi S. K. & Panigrahi, D. (2016), Crop insurance, the backbone of Indian farming community: Issues and challenges, *International Journal of Engineering Research and Applications*, 6(1), 39-47.
- Sundar, J. & Ramakrishnan, L. (2015), A study on awareness, purchase benefits and satisfaction level towards crop insurance, *Pacific Business Review International*, 7(11), 38-45.
- Tiwari, R., Chand, K. & Anjum B. (2020), Crop insurance in India: A review of Pradhan Mantri Fasal Bima Yojana (PMFBY), *FIIB Business Review*, 9(4), 249-55.

