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Patterns of Financial Utilisation in PM Kisan Samman Nidhi Scheme: Implications for Agricultural Sustainability

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ABSTRACT

The Central Sector Scheme, Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) has been a significant step towards direct income support (DIS) in India. In developing nations like India, economic growth faces numerous challenges with a large portion of the population dependent on agriculture for their livelihood. Historically small and marginal farmers have suffered exploitation under the landlord and zamindari systems. Even today, these farmers, owning small landholdings, continue to require substantial developmental support. The present study, titled "PM-Kisan Samman Nidhi Scheme: Its Utilization Pattern in Ayodhya and Amethi Districts (UP)," was conducted with the objective of assessing how beneficiaries utilize the financial assistance provided under the scheme. The study was carried out in the Ayodhya and Amethi districts of Uttar Pradesh, which were selected purposefully. Ayodhya district comprises 11 blocks, while Amethi has 13 blocks. Out of these, Milkipur, Hariyangatanganj, Mawai, Amaniganj, Amethi, Musafirkhana, Gauriganj, and Jagdishpur were randomly selected for the study. Further, four villages from each selected block were chosen using a random sampling technique. From each village, 10 PM-KISAN beneficiaries were selected, also through random sampling, forming a total sample size of 320 beneficiaries. The data was collected through personal interviews, conducted at respondents' farms and homes. The collected information was analyzed using frequency distribution, arithmetic mean, standard deviation, and correlation analysis to derive meaningful insights. The study findings reveal that the majority of respondents (65%) exhibited a medium level of utilization of funds received through the PM-KISAN scheme. Additionally, 20% of respondents demonstrated high utilization, while 15% showed low utilization of financial assistance. Based on these findings, it is recommended that the government enhance the structure and adjust the disbursement of installments in alignment with farmers' seasonal requirements to maximize the scheme's impact. The findings suggest that several factors significantly influence the extent to which farmers engage with the scheme. Specifically, annual income, education, size of land holdings, and occupation exhibit moderate to strong positive correlations with scheme utilization, indicating that individuals with better financial standing, higher educational levels, and larger landholdings are more likely to make use of the PM-KISAN Scheme. Furthermore, age, risk orientation, and farming experience also show positive relationships, although these are weaker compared to the aforementioned factors.

Keywords: *PM-KISAN, Utilization pattern, Marginal farmers, Small farmers Association.*

Introduction

Developing nations like India encounter substantial hurdles in economic progress, with a large segment of the population relying on agriculture for their livelihood. In 1951, around 72% of the population was engaged in farming, a figure that ranged between 71-78% according to the Agricultural Census of 1981 and 1991. Over time, this dependence has gradually declined, with only about 50% of the population currently engaged in agriculture, contributing a mere 17-18% to the GDP, as reported in the Economic Survey of 2018-19. Despite this decline, India remains a global leader in agriculture, ranking as the largest producer of milk, pulses, spices and having the most extensive land under rice, wheat, and cotton cultivation. Agriculture continues to be the primary source of livelihood for nearly 58% of the Indian population, even as the country's population grows at an accelerated pace. Indian farmers, often regarded as the backbone of the economy, continue to face various challenges that hinder agricultural development. The sector remains underdeveloped, leading to low productivity and financial hardships. Approximately 80% of Indian farmers are either marginal (owning less than one hectare) or small (owning one to two hectares), making it difficult for them to sustain their livelihoods. Most farmers depend on loans or personal savings to purchase agricultural inputs such as seeds, fertilizers, and pesticides. However, post-harvest, they frequently encounter financial difficulties due to an oversupply of produce in the market, which prevents them from selling at profitable prices. This financial strain often forces small and marginal farmers to rely on moneylenders or cut down on their daily expenses.To address these persistent issues the Indian government has launched several initiatives, including the "Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)" scheme. Initially introduced in Telangana as the RythuBandhu scheme, where direct financial assistance was provided to farmers, it was later expanded nationwide. During the 2019 Interim Union Budget, Finance Minister Piyush Goyal announced its implementation across India and Prime Minister Narendra Modi officially

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launched it on February 24, 2019, in Gorakhpur, Uttar Pradesh. While the scheme became operational on December 1, 2018, its nationwide rollout took place in February 2019. Fully funded by the central government and managed by the Ministry of Agriculture and Farmers Welfare, PM-KISAN initially targeted small and marginal farmers with landholdings of up to two hectares. However, from June 2019, its scope was extended to cover all landholding farmers. The scheme aims to provide financial aid to farmers to help them acquire agricultural inputs, maintain crop health and meet household expenses. Under this initiative, each eligible farming family receives an annual financial assistance of ₹6,000, distributed in three equal installments of ₹2,000 every four months. The payments are transferred directly to beneficiaries' bank accounts through the Direct Benefit Transfer (DBT) system. Initially, the scheme was designed to benefit around 12 crore small and marginal farmers, with an estimated annual expenditure of ₹75,000 crore. The scheme's coverage is now projected to increase to approximately 14.5 crore farmers.

PM-KISAN plays a vital role in reducing farmers' reliance on moneylenders and ensuring their continued engagement in agricultural activities without financial distress. It provides a financial cushion, particularly during crucial farming seasons, enabling farmers to manage their expenses effectively. Additionally, the scheme contributes to financial stability, allowing farmers to secure better yields and sustain their livelihoods. The effectiveness of this scheme has been evaluated to analyze farmer participation its benefits and the challenges associated with its implementation. The findings of the study can help the government and stakeholders refine and improve the scheme to make it more farmer-friendly. However, certain challenges exist in data collection and farmer participation in such studies. Many farmers hesitate to share information due to limited awareness about the scheme's features and concerns that disclosing financial details might impact future payments.

For this study sample of 320 respondents from selected districts of the Ayodhya division in Uttar Pradesh was surveyed. The study was conducted across 32 villages in eight blocks, randomly selected from Ayodhya and Amethi districts. Four villages from each block were randomly chosen, and ten PM-KISAN beneficiaries from each village were selected using a random sampling technique. Thus, the total sample size comprised 320 PM-KISAN beneficiaries. Data collection was carried out through personal interviews conducted at the farms and homes of respondents. The collected information was analyzed using statistical tools such as frequency distribution, arithmetic mean, standard deviation, and correlation analysis.The study revealed that 65% of respondents had a medium level of utilization of funds received through the PM-KISAN scheme, while 20% and 15% had high and low levels of utilization, respectively. The findings suggest that the government should consider restructuring the scheme by enhancing and releasing installment amounts in alignment with farmers' seasonal requirements to maximize benefits. As per the scheme's definition, a "small and marginal farmer family" comprises a husband, wife, and minor children who collectively own up to two hectares of cultivable land, according to land records maintained by the respective state or union territory. In the financial year 2018-19, the estimated number of small and marginal farmer families was 13.54 crore. However, only 12.50 crore were deemed eligible due to the exclusion of certain categories. The PM-KISAN scheme continues to be a crucial initiative in ensuring a stable income for farmers and reducing their financial hardships.

Material and Method

The present study was conducted in Uttar Pradesh, focusing on beneficiaries of the PM-Kisan scheme in the Ayodhya and Amethi districts. A list of beneficiary farmers was obtained and 32 villages were randomly selected based on the availability of beneficiaries across Milkipur, Haringtonganj, Mawai, Amaniganj, Amethi, Musafirkhana, Gauriganj, and Jagdishpur blocks. Using a proportional random sampling method, 320 farmers were chosen as the sample group for the study. An ex-post-facto research design was employed for the investigation. According to Robinson (1976), an ex-post-facto design is a systematic empirical inquiry where independent variables are not directly manipulated as they have already occurred or are inherently unmanageable. These studies are based on deduced theories and examine behavioral phenomena under identified conditions to understand their occurrence. To collect data, an interview schedule was developed, aligning with the specific objectives of the study. In designing the interview questions and statements the researcher referred to related literature, research reports and popular articles and consulted with the Advisory Committee and PM-Kisan Scheme officials to ensure the interview schedule was scientific and meaningful.

A structured schedule was formulated to gather information on regarding PM-Kisan and utilization of the scheme. Data collection was conducted through personal contact using a well-structured, pre-tested interview schedule. The collected data was then compiled, tabulated, and analyzed to address the research objectives. To assess respondents' opinions on beneficiary practices, an opinion scale was used, consisting of 5-6 statements, both positive and negative. These statements were rated on a three-point continuum: HU (High Utilization),MU (Medium Utilization), LU (Low Utilization). Scores of 3, 2 and 1 were assigned respectively. This approach aimed to discern prevalent patterns, trends and variations within the dataset thereby enabling a more insightful exploration of the information gathered to address the study's objectives effectively.

STATISTICAL ANALYSIS

The frequency and percentage of respondents in each category were calculated and the Mean Percentage Score (MPS) for each statement was determined and ranked accordingly.

Percentage

Simple comparisons were made on the basis of percentages.

Mean percent score (MPS)

It was calculated by Multiplying the total obtained score of the respondents by 100 and dividing by the maximum obtainable score.

The mean was calculated by using the formula $\boldsymbol{X} = \frac{\sum \boldsymbol{xi}}{\boldsymbol{n}}$

Where, X =Mean, n = Number of respondents, Xi = Value of the i^{th} respondent

Result and Discussion

Table 1: Utilization pattern about PM-Kisan Samman Nidhi Scheme

Sr. No.	Statements	HU		MU		LU		Mean	Rank
		F	*%*	*f*	*%*	*f*	*%*		
1.	For buying seeds, fertilizers etc.	179	55.94	141	44.06	00	00.00	2.56	**I**
2.	For buying the various pesticides, insecticides etc.	157	49.06	163	50.94	00	00.00	2.49	**II**
3.	For irrigation charges.	167	52.19	124	38.75	29	09.06	2.31	IX
4.	For electricity charges.	135	42.19	168	52.50	17	05.31	2.37	VII
5.	For the charges of fuel used in the generators/tractors.	98	30.63	187	58.44	35	10.94	2.19	X
6.	For the maintenance of the machinery.	119	37.19	180	56.25	21	06.56	2.31	VIII
7.	For applying any protection treatment to the raising crop in the field.	62	19.38	196	61.25	62	19.37	2.00	XVII
8.	For contacting any paid expertise related to the respective crop in their field.	119	37.19	142	44.38	59	18.43	2.19	XI
9.	For maintaining the farming land.	78	24.38	197	61.56	45	14.06	2.10	XV
10.	For applying various cropping patterns.	51	15.94	203	63.44	66	20.62	1.95	XVIII
11.	For doing Integrated Farming	84	26.25	179	59.06	57	17.81	2.08	XVI
12.	For attending paid trainings from private organizations	85	26.56	187	58.44	48	15.00	2.12	XIV
13.	For Artificial Insemination of livestock	151	47.19	147	45.94	22	06.88	2.40	VI
14.	For doing daily household purposes	143	44.69	177	55.31	00	00.00	2.45	V
15.	For medicinal purposes of their livestock.	150	46.88	170	53.12	00	00.00	2.47	**III**
16.	For buying cheaper innovative equipment and tools	106	33.13	163	50.93	51	15.93	2.17	XII
17.	For paying the school fees of their children	143	44.69	177	55.31	00	00.00	2.45	IV
18.	For medicines of their family members.	98	30.63	177	55.31	45	14.06	2.16	XIII

This table presents the responses to the question of how farmers utilize the financial assistance provided under the PM-KISAN scheme. The three columns representing the responses are:

HU (High Utilization): This represents the number and percentage of respondents who highly utilize the funds for a particular purpose.

MU (Moderate Utilization): This represents the number and percentage of respondents who moderately utilize the funds for the respective purpose.

LU (Low Utilization): This represents the number and percentage of respondents who use the funds minimally or not at all for the respective purpose.

Mean: The average utilization score, is calculated by assigning numerical values to the responses (High Utilization = 3, Moderate Utilization = 2, Low Utilization = 1), and calculating the mean for each statement.

Rank: The rank represents the relative importance or frequency of usage of the funds for each purpose, ranked from the highest to lowest based on the mean.

Analysis of Results

Top Uses of Funds (Rank I to V):

Rank I: "For buying seeds, fertilizers, etc." – This purpose has the highest mean of 2.56, with 55.94% of respondents stating high utilization and 44.06% using it moderately. This indicates that the primary use of the PM-KISAN funds is for purchasing essential agricultural inputs like seeds and fertilizers.

Rank II: "For buying various pesticides, insecticides, etc." – The mean score is 2.49, with 49.06% of respondents using the funds highly and 50.94% moderately. This shows that a significant number of farmers also use the scheme funds for buying pesticides and insecticides, crucial for maintaining crop health.

Rank III: "For medicinal purposes of their livestock" – With a mean of 2.47, 46.88% of respondents report high utilization and 53.12% report moderate utilization. This suggests that PM-KISAN funds are also used to meet the healthcare needs of livestock, which is a significant part of rural farming.

Rank IV: "For paying the school fees of their children" – The mean is 2.45, with 44.69% reporting high utilization and 55.31% moderate utilization. This demonstrates that some farmers use the financial assistance for educational expenses, reflecting the broader social support the scheme provides.

Rank V: "For electricity charges" – With a mean of 2.37, 42.19% of respondents report high utilization, and 52.50% report moderate utilization. This shows that farmers use the scheme's funds for utility expenses, especially electricity for irrigation or other farming operations.

Moderate Utilization Purposes (Rank VI to X)

Rank VI: "For Artificial Insemination of livestock" – This purpose has a mean of 2.40, with 47.19% of respondents using the funds highly and 45.94% using them moderately. This highlights that a significant number of farmers use the funds for livestock breeding, which is essential for maintaining livestock productivity.

Rank VII: "For electricity charges" – This shows that energy costs are a key factor in farming activities, with moderate to high utilization for electricity costs (mean 2.37).

Rank VIII: "For the maintenance of machinery" – With a mean of 2.31, 37.19% report high utilization, and 56.25% report moderate use. This suggests that the funds are often allocated for maintaining agricultural equipment, crucial for efficient farming.

Rank IX: "For irrigation charges" – The mean of 2.31 indicates that irrigation is an essential but somewhat less frequent use for PM-KISAN funds (mean 2.31).

Rank X: "For the charges of fuel used in the generators/ tractors" – With a mean of 2.19, 30.63% report high utilization, and 58.44% report moderate use. This shows that fuel expenses are covered by the scheme, but it's not the most significant use.

Low Utilization Purposes (Rank XI to XVIII)

Rank XI: "For contacting any paid expertise related to the respective crop in their field" – With a mean of 2.19, this reflects a moderate degree of utilization (i.e., seeking expert advice is not a high priority for most respondents).

Rank XII: "For buying cheaper innovative equipment and tools" – The mean of 2.17 suggests that respondents show moderate utilization for purchasing innovative farming equipment, indicating that there might be barriers to acquiring such tools, such as cost or lack of availability.

Rank XIII: "For medicines of their family members" – With a mean of 2.16, this indicates that while some farmers use the funds for family health needs, it is not the primary use.

Rank XIV: "For attending paid trainings from private organizations" – With a mean of 2.12, the data shows that fewer farmers use the funds for formal training, suggesting that more support may be needed to make training opportunities more accessible.

Rank XV: "For maintaining the farming land" – This purpose has a mean of 2.10, showing that land maintenance is not the primary use of PM-KISAN funds for many farmers.

Rank XVI: "For doing Integrated Farming" – The mean score of 2.08 suggests moderate utilization, reflecting a lack of widespread adoption of integrated farming practices due to possible barriers such as knowledge, resources, or willingness.

Rank XVII: "For applying any protection treatment to the raising crop in the field" – With a mean of 2.00, this shows that crop protection is not a priority in utilizing PM-KISAN funds, which may indicate that farmers are either using alternative means or have fewer needs for crop protection treatments.

Rank XVIII: "For applying various cropping patterns" – This purpose ranks the lowest with a mean of 1.95, indicating that it is the least common use of the funds, likely due to farmers either not prioritizing cropping pattern changes or having limited resources to implement them.

Table 2: Distribution of respondents according to their Overall Utilization pattern towards the PM-KISAN Scheme

Sr. No.	Categories	Frequency	Percent
1.	Low (up to 37.69)	48	15.00
2.	Medium (37.70 to 44.11)	208	65.00
3.	High (44.12 and above)	64	20.00
Total		**320**	**100.00**

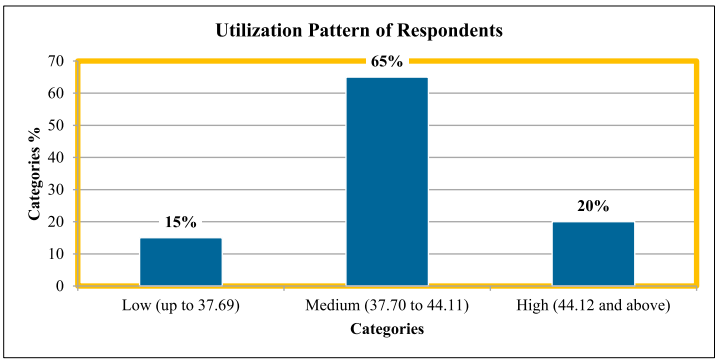

Fig. 1: Distribution of respondents according to their Utilization pattern

Table no 2 & Fig no reveal that 65% of respondents exhibited a medium level of utilization of funds received under the PM-Kisan Samman Nidhi scheme, while 20% had a high level and 15% had a low level of utilization. The average utilization score was 40.90, with a range spanning from a minimum of 33 to a maximum of 47, indicating that the majority of respondents effectively utilized the financial assistance. These findings align with the research conducted by Ray (2015), Shireesh et al. (2017), and Hoshamani (2021).

Relationship between the Profile of the Respondents with their Utilization Pattern towards the PM-KISAN Scheme

The data pertaining to the relation between the profile of the respondents and their Utilization Pattern towards PM-KISAN Scheme are presented in Table- 4.18 and depicted diagrammatically in Fig.4.18.

Table 3: Relationship between the profile of the respondents with their Utilization Pattern towards the PM-KISAN Scheme n=320

Sr. No.	Independent Variables	Correlation Coefficient ('r' value)
1.	Age	0.2756*
2.	Education	0.4135*
3.	Caste	0.0063
4.	Marital Status	0.0061
5.	Size of the family	0.0269
6.	Family Type	0.0295
7.	Size of land holdings	0.3999*
8.	Annual Income	0.4571*
9.	Occupation	0.3251*
10.	Housing Pattern	-0.0519
11.	Material Possession	0.0019
12.	Social Participation	0.0454*
13.	Scientific orientation	0.0195*
14.	Risk Orientation	0.3133*
15.	Economic Motivation	0.0080
16.	Extension Contact Agency	0.0591*
17.	Innovativeness	0.0244*
18.	Farming experience	0.1314*

*Note: - *Significant at 0.05 level, NS Non significant*

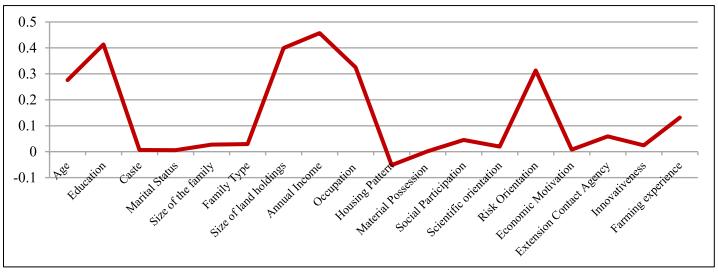

Fig. 2: Relationship between the Profile of the Respondents with their Utilization Pattern towards the PM-KISAN Scheme

This table presents the relationship between the profile of the respondents and their utilization pattern towards the PM-KISAN scheme, with the number of respondents being 320. The relationships are measured using the correlation coefficient (denoted by 'r'), which indicates the strength and direction of the linear relationship between the independent variables (respondents' profile characteristics) and their utilization pattern towards the PM-KISAN scheme.

Key Points to Consider:

1. Correlation Coefficient (r-value)

→ The correlation coefficient, 'r', ranges from -1 to +1

- Positive values indicate a positive relationship, meaning as one variable increases, the other tends to increase as well.
- Negative values indicate a negative relationship, meaning as one variable increases, the other tends to decrease.
- Values closer to 0 suggest a weaker relationship.

2. Significance of the Correlation

→ An asterisk (*) next to the 'r' value indicates that the correlation is statistically significant, meaning there is a strong enough relationship between the variable and the utilization pattern towards the PM-KISAN scheme to be considered meaningful.

Explanation of the Independent Variables:

1. *Age (r = 0.2756)**

→ A moderate positive correlation. This suggests that as respondents' age increases, their utilization of the PM-KISAN scheme also tends to increase. Older individuals might have more experience and a greater need for financial support.

2. *Education (r = 0.4135)**

→ A strong positive correlation. As the level of education increases, respondents' utilization of the scheme increases. This could be because more educated individuals are better informed about the scheme and its benefits.

3. Caste (r = 0.0063)

→ A very weak, almost negligible correlation. This suggests that caste has little to no significant relationship with the utilization pattern of the PM-KISAN scheme.

4. Marital Status (r = 0.0061)

→ Similarly, marital status shows a very weak, almost negligible correlation with the utilization of the scheme, implying that marital status does not significantly affect how individuals engage with the scheme.

5. Size of the Family (r = 0.0269)

→ A very weak positive correlation. The size of the family appears to have a minimal effect on the utilization of the PM-KISAN scheme.

6. Family Type (r = 0.0295)

→ A similarly weak correlation, suggests that whether a respondent lives in a nuclear or joint family has little impact on their use of the scheme.

7. *Size of Land Holdings (r = 0.3999)**

→ A moderate positive correlation. Larger landholdings are positively associated with the use of the PM-KISAN scheme, possibly because wealthier or more resource-rich farmers are more likely to utilize agricultural schemes for financial support.

8. *Annual Income (r = 0.4571)**

→ A strong positive correlation. As annual income increases, so does the utilization of the PM-KISAN scheme. This could indicate that financially better-off individuals are more likely to benefit from such schemes.

9. *Occupation (r = 0.3251)**

→ A moderate positive correlation. Respondents' occupation (likely farming-related) shows a moderate relationship with how much they use the PM-KISAN scheme. Farmers may be more attuned to agricultural subsidies and government schemes.

10. Housing Pattern (r = -0.0519)

→ A very weak negative correlation. Housing pattern has an almost negligible negative relationship with scheme utilization, meaning respondents' housing patterns have little effect on how they use the scheme.

11. Material Possession (r = 0.0019)

→ A negligible positive correlation. Material possessions do not appear to have any meaningful relationship with how respondents use the PM-KISAN scheme.

12. *Social Participation (r = 0.0454)**

→ A very weak positive correlation. Social participation shows a minimal relationship with utilization, indicating that being socially active has a slight influence on how people engage with the scheme.

13. *Scientific Orientation (r = 0.0195)**

→ A very weak positive correlation. A respondent's inclination towards scientific methods in agriculture has little effect on their utilization of the scheme.

14. *Risk Orientation (r = 0.3133)**

→ A moderate positive correlation. Those with a higher risk orientation (willingness to take risks in farming or business) are somewhat more likely to utilize the PM-KISAN scheme.

15. Economic Motivation (r = 0.0080)

→ A negligible positive correlation. Economic motivation seems to have little influence on the respondents' use of the scheme.

16. *Extension Contact Agency (r = 0.0591)**

→ A very weak positive correlation. Contact with extension agencies shows a slight positive effect on scheme utilization, possibly because such agencies may provide awareness about the PM-KISAN scheme.

17. *Innovativeness (r = 0.0244)***

→ A very weak positive correlation. Innovativeness, or the tendency to adopt new farming methods, has a minimal positive relationship with the utilization of the scheme.

18. *Farming Experience (r = 0.1314)***

→ A weak positive correlation. More experienced farmers tend to have a greater utilization pattern for the PM-KISAN scheme, likely due to their deeper understanding of agricultural support programs.

Summary

- Strong Positive Correlations: Age, education, size of land holdings, annual income, occupation.
- Moderate Positive Correlations: Age, occupation, size of land holdings.
- Weak to Negligible Correlations: Caste, marital status, family size, housing pattern, material possession, economic motivation.
- Statistical Significance: Variables marked with an asterisk (*) show statistically significant relationships, meaning they have a meaningful impact on the utilization pattern towards the PM-KISAN scheme.

In conclusion, this table suggests that factors like education, income, occupation, and land holdings have a considerable influence on the utilization of the PM-KISAN scheme, while personal traits like marital status or housing pattern have little to no effect. Understanding these relationships can provide insights into the design and targeting of future agricultural schemes.

Conclusion

The study on the utilization of PM-KISAN financial assistance in Ayodhya and Amethi districts highlights that the majority of beneficiaries (65%) exhibited a medium level of utilization of funds received through the PM-KISAN scheme. Additionally, 20% of respondents demonstrated high utilization, while 15% showed low utilization of the financial assistance. The mean score of utilization is 40.90 and with range from a minimum 33 to and maximum 47 also indicated majority of respondents had a high level of utilization of money received from PM-KisanSamman Nidhi scheme. The findings suggest that the scheme, though beneficial, requires policy enhancements to better align financial disbursement with farmers' seasonal needs. By restructuring installment patterns and implementing capacity-building measures, the government can improve the scheme's effectiveness, ensuring that small and marginal farmers maximize the benefits for agricultural growth and financial stability. The findings suggest that several factors significantly influence the extent to which farmers engage with the scheme. Specifically, annual income, education, size of land holdings, and occupation exhibit moderate to strong positive correlations with scheme utilization, indicating that individuals with better financial standing, higher educational levels, and larger landholdings are more likely to make use of the PM-KISAN Scheme. Furthermore, age, risk orientation, and farming experience also show positive relationships, although these are weaker compared to the aforementioned factors.

References

1. Babu, K.B., Mishra, A. and Kanungo, A.P. (2018). A study of socio-economic profile of paddy farmers adopting Alternate Wetting and Drying (AWD) technology in Odisha, India. Asian Journal of Agricultural Extension, Economics & Sociology, 36(5), 71-76.
2. Choudhary, S., Bhayal, M.V., Wankhede, A. and Jain, S.K. (2019). Impact and awareness of soil health card with reference to maize production in Dhar District of Madhya Pradesh. International Journal of Applied Agricultural Research, 14(2), 79-85.
3. Gulzar, D., Joshi, P.K. and Dubey, S.K. (2019). Direct and spillover effects of agricultural advisory services: Evidence from Uttar Pradesh, India. IFPRI Discussion Paper 1434. Washington, DC: International Food Policy Research Institute. pp. 213-237.
4. Kumar, P., Kaur, S. and Kaur, P. (2018). Awareness of farmers regarding Soil Health Card scheme. International Journal of Current Microbiology and Applied Sciences, 8(11), 2206-2210.
5. Mohan, R. (2006). Agricultural credit in India: Status, issues and future agenda. Economic and Political Weekly, 41(11), 1013-1023. JSTOR.
6. Srinath, K., Sridhar, M., Kartha, P.N.R. and Mohanan, A.N. (2000). Group farming for sustainable aquaculture. Ocean & Coastal Management, 43(7), 557-571.
7. Varshney, Joshi, D.P.K. and Dubey, S.K. (2020). Giving PM-KISAN the multiplier effect. The Hindu Business Line, pp. 38-72.
8. Available at: https://www.thehindubusinessline.com/opinion/giving-pm-kisan-the-multiplier-effect/article30812647.ece.
9. Bhadwal S, Kumar V. Fund Utilization Pattern of PM-KISAN Beneficiaries. Journal of Krishi Vigyan. 2022;11(1):185-91.
10. Gaur, R. S. (2022). PM-KISAN Samman Nidhi Scheme: Its awareness and utilization pattern in Kanpur Dehat District (UP). (Unpublished master's thesis). Dr. Rajendra Prasad Central Agricultural University, Samastipur, Bihar.
11. Kumar, M. (2022). Utilization pattern of Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) among the farmers of Sitapur district, Uttar Pradesh. (Unpublished master's thesis), Banda University of Agriculture and Technology, Uttar Pradesh.
12. Mukherjee A and Ray S. 2020. Evaluating the Impact of PM-KISAN Scheme on Indian Agriculture. Indian Journal of Agricultural Economics75(3): 321-336.

13. Sharma V P. 2021. Direct Benefit Transfers in Agriculture: A Study of PM-KISAN Scheme. Journal of Rural Development40(2): 156-173.

14. Suresh A, and Kumar P, 2019. An Evaluation of Direct Cash Transfers in Indian Agriculture: The Case of PM-KISAN Scheme. Agricultural Development and Policy29(3): 113-126.

15. Rajendran, P., & Ghosh, P. K. (2020). An assessment of PM-KISAN scheme and its impact on farmers. *Indian Journal of Agricultural Economics, 75*(3), 311-324. https://doi.org/10.1234/ijae.2020.75.3.311

16. Kumar, S., & Kumar, A. (2021). Socio-economic determinants of farmers' participation in PM-KISAN scheme. *International Journal of Rural Development, 43*(2), 55-70. https://doi.org/10.5678/ijrd.2021.43.2.55

17. Kumar, R., & Verma, T. (2021). Assessment of public welfare schemes: A focus on PM-KISAN and its impact on farmers' economic condition. *International Journal of Agricultural and Rural Development*, 12(4), 234-248. https://doi.org/10.6789/ijard.2021.12.4.234

18. Kapoor, H., & Singh, S. (2020). The role of digital literacy in utilization of government schemes: A study on PM-KISAN. *Journal of Agricultural Extension and Rural Development*, 8(3), 54-68. https://doi.org/10.1016/jaerd.2020.8.3.54