AN ANALYSIS OF UTILIZATION PATTERN OF THE BENEFITS OF PRADHAN MANTRI KISAN SAMMAN NIDHI YOJANA (PM-KISAN) SCHEME BY FARMERS OF TAMIL NADU

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ABSTRACT

An Ex-post facto study was conducted among 200 respondents who are beneficiaries of PM-KISAN scheme in Karur district of Tamil Nadu, India to analyse the utilization pattern of PM-KISAN scheme cash benefits by the farmers. Data was collected through semi-structured Interview schedule and analysed using percentage analysis, cumulative frequency, graphic rating scale, regression and correlation. Among 200 respondent's majority of the respondents belong to Small and marginal farmers (64.50%), Old aged (73.50%), Male (77.5%). About 55.00 per cent of the respondents utilized the cash benefits for Agriculture purpose only followed by 32.50 per cent and 12.50 per cent for Non-Agricultural purposes and both Agriculture & non-Agriculture respectively. Cash benefits were majorly used for seeds and sowing under agricultural purposes and in terms of non-agricultural purposes, household expenses and for other needs. The beneficiaries rated PM-KISAN scheme at 3.9 out of 5 using graphic rating scale.

KEYWORDS: Graphic Rating Scale, Percentage Analysis & Cumulative Frequency

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INTRODUCTION

PM-KISAN Samman Nidhi Yojana is the central sponsored scheme of Government of India effective from December 2018. The PM-KISAN scheme aims to supplement the financial needs of the farmers in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income at the end of each crop cycle. This would also protect them from falling in the clutches of moneylenders for meeting such expenses and ensure their continuance in the farming activities. Under the scheme, an income support of Rs.6000/- per year is provided to all farming families across the country in three equal instalments of Rs.2000/- every four months per year.(Ministry of Agriculture and farmers welfare-Department of Agriculture 2018-2019).Under these circumstances, there is a need to understand the actual utility/usefulness of the scheme so as to ensure accountability of public money and to indicate the policy makers and administrators to make necessary corrections and improvements, for better utilization by the farmers for their development. Some studies showed findings related this study such as access to cash benefit encourage the fertilizer usage and increase their net income and also increase risk-taking capacity (Adesina 1996),cash transfer to poor householders may result in increasing by investment in livestock activities (Haushofer and Shapiro 2017) and farmers access to formal credit which helps in improving and increasing their already established own business (Banerjee, Breza et al. 2017). Hence, the present

study is proposed to understand the profile, utilization pattern and relationship of utilization pattern with independent variables of the beneficiaries of PM-KISAN scheme. This study conducted after first year completion of PM-KISAN Scheme (2018-2019).

MATERIALS AND METHODS

Ex-post-facto research design is adopted for the study. Karur district in Tamil Nadu was randomly selected for this study. Four blocks in Karur district were selected based on the highest number of PM-KISAN beneficiaries. Two villages from each block were selected randomly and 25 farmers from each of the selected villages were selected for the study with a total 200 respondents. The villages selected for the study are Mookanakurichi, Jagadebi, Kalugur, Gudalur, Papakkapatti, Mahadanapuram (south), Kosur and Mavathur. The data were collected through personal interview using a semi-structured interview schedule. The collected data were analysed and tabulated using statistical tools namely cumulative frequency, percentage analysis, regression and correlation and graphic rating scale.

The profile of the beneficiaries was analysed the presented in the table 1 below:

I) PROFILE OF THE RESPONDENTS

Table 1: Profile of the PM-KISAN beneficiaries

n=200

Item	Category	Number	Per cent
a) Socio personal variables			
Age	Young (<35)	22	11.00
	Middle (36-45)	31	15.50
	Old (>45)	147	73.50
Gender	Male	155	77.50
	Female	45	22.50
Education	Illiterate	49	24.50
	Functionally literate	13	06.50
	Primary school education	84	42.00
	Middle school education	46	23.00
	Secondary school education	5	02.50
Occupation	Collegiate education	3	01.50
	Farming alone	116	58.00
	Farming + Business	7	03.50
	Farming + Labour	69	34.50
Social participation	Farming + Government /private services	8	04.00
	Low	73	36.50
	Medium	76	38.00
Family status	High	51	25.50
	Nuclear	84	42.00
	Joint	116	58.00
a) Socio psychological variables			
Economic motivation	Low	34	17.00
	Medium	131	65.50
	High	35	17.50
Credit orientation	Low	41	20.50
	Medium	129	64.50
	High	30	15.00
Risk orientation	Low	36	18.00
	Medium	132	66.00
	High	32	16.00

b) Economic variables			
Farm size	Marginal farmer (Up to 1.00 ha)	69	34.50
	Small farmer (1.01 ha to 2.00 ha)	60	30.00
	Medium farmer (2.00 to 10.00 ha)	42	21.00
	Big farmer (Above 10.00 ha)	29	14.50
Annual income	Low level of income	29	14.50
	Middle level of income	147	73.50
	High level of income	24	12.00
c) Communication variables			
Extension agency contact	Low	38	19.00
	Medium	123	61.50
	High	39	19.50
Cosmopolitaness	Low	44	22.00
	Medium	103	51.50
	High	53	26.50

It could be observed from Table 1 that majority of the respondents belongs to old age (73.50%) followed by middle (15.50%) and young age (11.00%). 77.50 per cent of the respondents were male followed by 22.50 per cent of female. Nearly two-fifth of the respondents (42%) had primary education followed by 24.5 per cent and 23 per cent were illiterate and middle school education respectively. Little less than three-fifth of the respondents (58%) were only farming followed by 34.50 per cent of the respondents were involve in farming and in addition as a Labourer. 58 per cent of the respondents live in joint families followed by nuclear families (42 per cent). Majority of the respondents have medium level of social participation, economic orientation, risk orientation extension agency contact, Cosmopolitaness, Annual income and nearly two-third of the respondents (64.50 %) belong small and marginal farmer category.

II) UTILIZATION PATTERN OF PM-KISAN CASH BENEFITS BY BENEFICIARIES

The details of cash benefits received by farmers and their utilization for various purposes were analysed and categorized into Agriculture and non- agricultural purposes and for both agricultural and non-agricultural purposes. The details are presented in Table 2.

Table 2: Utilization pattern of PM-KISAN cash benefits by beneficiaries

n=200

S. No.	Utilization purposes	Beneficiaries	Per Cent	Per Cent of cash benefit utilized	
				Agriculture	Non-Agriculture
1.	Agriculture only	110	55.00	100.00	-
2.	Non-Agriculture only	65	32.50	-	100.00
3.	Agricultural & Non-Agricultural purposes	25	12.50	60.75	39.25
		200	100.00		

The table 2 illustrates that 55.00 per cent of respondents utilized their full cash benefit for agriculture purpose, followed by 32.50 per cent of respondents utilized their full cash benefit for non-agricultural purpose. 12.50 per cent of respondents used their cash benefits for both agricultural and non-agricultural activities. Among agricultural and non-agricultural purpose, the cash benefit was used at 60.75 per cent and 39.25 per cent respectively.

Among 200 respondents, 164 respondents received full cash benefit (INR 6000), followed by 25 respondents and 11

respondents received INR 4000 and INR 2000 respectively as they have joined late in the scheme.

a) Cash benefit utilization pattern of the respondents only for agriculture

The cash benefit utilization pattern of respondents pertaining to agriculture which include crop production and Animal husbandry activities. The activity wise utilization is presented in Table 3.

Table 3: Cash benefit utilization pattern of the respondents only for agriculture

n=110

S. No.	Particulars	Beneficiaries		Average cash benefit	
		Number	Per cent	Cash benefit (INR)	Per cent
I)	Crop production				
1.	Land preparation	36	32.73	989.10	17.92
2.	Seed and sowing purposes	42	38.18	1474.55	26.72
3.	Crop management	34	30.91	1204.55	21.83
4.	Crop protection	12	10.91	300.00	05.44
5.	Other purposes	32	29.10	1112.73	20.16
	Total average crop production utilization			5080.93	92.07
II)	Animal husbandry				
1.	Livestock management	12	10.91	437.27	07.93
	Total average cash benefit utilized in agriculture			5518.20	100.00

*-Multiple responses

It could be observed from the table 3 that majority of the respondents utilized their cash benefit for seed & sowing purposes (38.08%) followed by land preparation (32.73%) and crop management purposes (30.91%) which includes fertilizer and weed management purposes and purposes were inclusive of the labour cost. In terms of average cash benefit utilized respondents (agriculture only) utilized 92.07 per cent of the cash benefit for crop production purposes followed by livestock management (7.93%).

b) Cash benefit utilization pattern of the respondents only for non-agriculture

The cash benefit utilization pattern of the respondents towards non- agricultural purpose were classified into household expenses, repayment of loan, medical expenses, educational expenses and recreational expenses. The details are presented in Table 4

Table 4: Cash benefit utilization pattern of the respondents only for non-agriculture

n=65

S. No.	Particulars	Beneficiaries		Average cash benefit	
		Number	Per cent	Cash benefit (INR)	Per cent
1.	Household expenses	41	63.10	3093.75	55.93
2.	Repayment of loan	14	21.54	1156.25	20.90
3.	Medical expenses	9	13.84	31.25	00.57
4.	Educational expenses	11	16.92	562.50	10.17
5.	Recreational expenses	2	03.10	687.50	12.43
	Total average cash benefit utilized in non-agriculture			5531.25	100.00

*-Multiple responses

It could be observed from the table 4 that nearly two-third of the respondents were utilized their cash benefit for household purposes (63.10%) followed by repayment of loan (21.54%) and educational purposes (16.92%). In terms of average cash benefit utilized, majority of the cash benefit utilized for household purposes (55.93%) followed by repayment of loan (20.90%) and recreational purposes (12.43%) which include festival, temple, games and liquor expenses.

c) Cash benefit utilization pattern of the respondents for both agriculture and non-agriculture purposes

The cash benefit utilization pattern of the respondents towards agricultural and non-agricultural purposes are presented in table 5.

Table 5: Cash benefit utilization pattern of the respondents for both agriculture and non-agriculture purposes

n=25

S. No.	Particulars	Beneficiaries		Average cash benefit	
		Number	Per cent	Cash benefit	Per cent
A)	Agriculture				
I)	Crop production				
1.	Land preparation	12	48.00	1100.00	19.71
2.	Seed and sowing purposes	9	36.00	660.00	11.83
3.	Crop management	4	16.00	360.00	06.45
4.	Crop protection	5	20.00	230.00	04.12
5.	Other purposes	8	32.00	1000.00	17.92
	Total crop production utilization cost			3350.00	
II)	Animal husbandry				
1.	Livestock management	1	04.00	40.00	00.72
	Total average cash benefit utilized in agriculture			3390.00	60.75
B)	Non-agriculture				
1.	Household expenses	20	80.00	1826.00	32.72
2.	Repayment of loan	1	04.00	40.00	00.71
3.	Medical expenses	1	04.00	24.00	00.43
4.	Educational expenses	1	04.00	160.00	02.87
5.	Recreational expenses	2	08.00	140.00	02.51
	Total average cash benefit utilized in non-agriculture			2190.00	39.25

*-Multiple responses

It could be observed from the table 5 that respondents those utilized the cash benefit for both agricultural and non-agricultural purposes were utilized majority of the cash benefit for agricultural purposes (60.75%) followed by 39.25 per cent in non-agricultural purposes. In this category household expenses were their majority utilization followed by land preparation (19.71%) and seed & sowing purposes (11.83%).

III) RELATIONSHIP BETWEEN THE CHARACTERISTICS AND UTILIZATION PATTERN OF THE RESPONDENTS

To study the relationship between and contribution of the profile characteristics and the utilization pattern of the respondents, simple correlation coefficient and regression analysis were carried out and are presented in Table 6.

Table 6: Correlation and regression between the profiles of the respondents with utilization pattern of the respondents

Variable. No.	Variables	'r' value	Regression coefficient	't' value	'P' value
X ₁	Age	0.083NS	0.106	2.195*	0.029
X ₂	Gender	-0.087NS	0.119	2.257*	0.025
X ₃	Educational status	0.152*	0.186	3.856**	0.000
X ₄	Occupational status	0.80NS	0.015	0.314NS	0.754
X ₅	Family status	-0.34NS	-0.017	-0.372NS	0.710
X ₆	Income	-0.42NS	0.056	1.138NS	0.257
X ₇	Farm size	-0.50NS	0.005	0.096NS	0.924
X ₈	Social participation	0.02 NS	0.005	0.095NS	0.924
X ₉	Extension agency contact	0.760NS	0.785	16.673**	0.000
X ₁₀	Credit orientation	0.003*	-0.075	-1.596NS	0.112
X ₁₁	Cosmopolitness	0.101NS	-0.004	-0.085NS	0.932
X ₁₂	Economic motivation	0.119NS	-0.098	-2.115*	0.036
X ₁₃	Risk orientation	0.73NS	-0.047	-0.971NS	0.333

$$R^2=0.630 \quad F=24.345^{**}$$

** - Significant at 1 per cent level, NS – Non significant, * - Significant at 5 per cent level

From the Table 6, it is observed that educational status(X₃) and credit orientation (X₁₀), exhibited significant and positive correlation with utilization pattern of the beneficiaries at five per cent level of significance and educational status(X₃) and extension agency contact(X₉) showed positive contribution on utilization pattern of respondents. The R² value given that all the variables together contributed 63.00 per cent variation in the utilization pattern of the respondents of PM-KISAN scheme and the F value were found to be significant at one per cent level. Therefore, the predicted equation fitted for the utilization pattern of the respondents as given below

$$Y_1=3.1740 + 0.106*(X_1) + 0.119*(X_2) + 0.186^{**}(X_3) + 0.015(X_4) - 0.017(X_5) + 0.056(X_6) + 0.0005(X_7) + 0.005(X_8) + 0.785^{**}(X_9) - 0.075(X_{10}) - 0.004(X_{11}) - 0.098^{*}(X_{12}) - 0.047(X_{13})$$

From the above predicted equation, variables such as educational status (X₃) and extension agency contact (X₉) had positive and significant contribution at one per cent level of probability, variables such as age (X₁), gender (X₂) had positive and economic motivation (X₁₂) had negative & significant contribution at five per cent level of probability. The other variables were found to be non-significant with utilization pattern of the respondents.

The results showed that increasing in variables such as age (X₁), gender (X₂) educational status (X₃) and extension agency contact (X₉), by one-unit *ceteris paribus*, would increase utilization pattern of the respondents of the PM-KISAN scheme by 0.186,0.785,0.106 and 0.119 units respectively.

Since, educational status (X₃) is significant at one per cent level and its coefficient value is 0.186, for a unit increase in educational status that rate of increase in utilization pattern is 0.186 units due to increase in educational level of the respondents leads to increase of utilization in agriculture in productive ways. Extension agency contact (X₉) is significant at one per cent level and its coefficient value is 0.785. Hence, for a unit increase in extension agency contact (X₉) that rate of increase in utilization pattern is 0.785 units because higher contact leads to useful in utilizing cash in useful ways. The variable age (X₁) is significant at five per cent level and its coefficient value is 0.106, for a unit increase

in educational status that rate of increase in utilization pattern is 0.106 units because most of the agricultural respondents were old age category, they mostly believe in incentives given by the government these leads to increase in utilization of cash benefit.

The variable gender(X2) is significant at five per cent level and its coefficient value is 0.119, for a unit increase in educational status that rate of increase in utilization pattern is 0.119 units because gender plays a major role in utilization pattern for agricultural or Non-agricultural purposes. The only negative variable economic motivation(X12) is significant at five per cent level and its coefficient value is -0.098, for a unit increase in educational status that rate of decrease in utilization pattern is 0.098units.

IV) RATING OF THE PM-KISAN SCHEME BY PM-KISAN BENEFICIARIES

The ratings were given by the PM-KISAN beneficiaries were consolidated as **3.9 out of 5** by using **graphic rating scale technique** in table 7 and also revealed that emotions of the respondents indicate that the people are glad on the launch and progress of the scheme but they opine for further improvement for the betterment of the farmers.

Table 7: Ratings of the PM-KISAN scheme

n=200

S. No.	Ratings	Beneficiaries		ratings
		Number	Per cent	
1	Less satisfied	4	02.00	3.9
2	Somewhat satisfied	13	06.50	
3	Moderate satisfied	42	21.00	
4	Very satisfied	77	38.50	
5	Extreme satisfied	64	32.00	
	Total	200	100.00	5

CONCLUSIONS

This present study clearly shows that the PM-KISAN Samman Nidhi Yojana beneficiaries were majorly using their cash benefit for agricultural purposes than non-agricultural purposes and in terms of average cash benefit utilized, respondents utilized more on non-agricultural activities such as household expenses than agricultural purposes. The respondents had given 3.9 ratings out of 5 for this scheme and they need some more improvement for the betterment of farmers.

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