



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2022; SP-11(6): 3050-3055
© 2022 TPI
www.thepharmajournal.com
Received: 10-04-2022
Accepted: 13-05-2022

Ashish Verma
M. Sc. (Ag.) Scholar, Division of
Agricultural Economics & Agri-
Business Management, SKUAST-
Jammu, Jammu and Kashmir, India

SP Singh
Assistant Professor, (Stage-03),
Division of Agricultural Economics &
Agri-Business Management,
SKUAST-Jammu, Jammu and
Kashmir, India

Jyoti Kachroo
Professor & Head, Division of
Agricultural Economics & Agri-
Business Management, SKUAST-
Jammu, Jammu and Kashmir, India

M Iqbal Jeelani Bhat
Assistant Professor (Stats.), Division
of Statistics & Comp. Science,
SKUAST-Jammu, Jammu and
Kashmir, India

Santosh Kumar Singh
Associate Professor, Division of Plant
pathology, SKUAST-Jammu, Jammu
and Kashmir, India

Palvi Sharma
M. Sc. (Ag.) Scholar, Division of
Agricultural Economics & Agri-
Business Management, SKUAST-
Jammu, Jammu and Kashmir, India

Goldy Bhagat
Ph. D. Scholar, Division of
Agricultural Economics & Agri-
Business Management, SKUAST-
Jammu, Jammu and Kashmir, India

Maninder Singh
Ph. D. Scholar, Division of
Agricultural Economics & Agri-
Business Management, SKUAST-
Jammu, Jammu and Kashmir, India

Corresponding Author
Ashish Verma
M. Sc. (Ag.) Scholar, Division of
Agricultural Economics & Agri-
Business Management, SKUAST-
Jammu, Jammu and Kashmir, India

An economic analysis of fund utilization by different categories of beneficiary farmers under PM-KISAN scheme in Jammu Region of J&K (U.T.)

Ashish Verma, SP Singh, Jyoti Kachroo, M Iqbal Jeelani, Santosh Kumar Singh, Palvi Sharma, Goldy Bhagat and Maninder Singh

Abstract

PM-KISAN is a union government funded scheme launched in December 2018 to help farmers purchase various agricultural inputs. Payments under the scheme started in February 2019. It provides to each eligible farmer's family 6000 Rupees (Rs.) per year in three instalments of Rs.2000 each. Initially, farmers with less than 2 hectares (ha) of land were eligible; subsequently, beginning in June 2019, the scheme was extended to all farmers totally 140 million across India. In India, more than half of its farming households do not have access to formal credit. In such situation, the introduction of cash transfer scheme (Pradhan Mantri Kisan Samman Nidhi, or PM-KISAN) in December 2018 to ease the liquidity constraints of Indian farmers for farmers for procuring inputs is quite salient. Sadoulet, de Janvry and Davis (2001) displayed a multiplier effect of cash transfers. All of these studies implies that a productive investment in short run may lead to sustained long-term impacts. Conceptually, a cash transfer can encourage farmers to spend an amount of money on productive activities for several reasons. First, it may help in easing incumbent credit and liquidity constraints on purchasing agricultural inputs, extremely pertinent in India. Adesina (1996) concluded that access to credit encourages fertilizer use. Secondly, Cash transfer increases the net incomes of farmers and thus, in turn, may enhance their risk-taking capacity, leading them to undertake riskier but comparatively more productive investments. Yet cash transfer beneficiaries' investment in productive activities may be limited in developing countries (Maluccio 2010). In the general, the effects of cash transfer on outcomes such as household consumption, educational attainment and health are well analysed (Gertler 2004; Fiszbein and Schady 2009; Adato and Bassett 2009). However, the impacts of cash transfers on agriculture sector are comparatively less studied including, importantly their impact on technology adoption (examples includes Sadoulet, de Janvry, and Davis 2001; Gertler, Martinez and Rubio-Codina 2006; Hanshofer and Shapiro 2016; and Tirivayi, Knowles and Davis 2016). In this context, PM-KISAN presents a natural experiment to access the effects of cash transfers. For the intervention to provide long-term impacts, there must be investment in productive activity. In this context, Gertler, Martinez and Rubio-Codina (2006) and Handa *et al.* (2018) have shown that small monthly cash transfers may lead to increased consumption even after beneficiaries leave the program. Haushofer and Shapiro (2016) showed that a large unconditional transfer to poor households may increase future earning by encouraging investments in livestock.

Keywords: PM-KISAN, cash transfer, consumption and investment

Introduction

In India, agriculture is considered as a backbone sector in its economy. Not only because it provide 54.6% population with jobs but also because it has been a sector which provide strength to other sectors. Whether it may be raw material to industries or food grains to feed people. But in recent years, agriculture sector has lost its popularity as an occupation. This may be due to various reasons but the most basic is due to low return on its investment. Indian farmers are majorly marginal farmers owning less than one hectare of land. Mostly, an Indian farmer borrows money or invests his personal saving for inputs such as seeds, fertilizers, chemicals, etc. and waits for the harvest to fulfil his needs sometimes even the basic ones. But mostly after harvest, farmer is not able to get his full return as he is not able to sell his produce even at his cost of cultivation. This is due to enormous increase in the supply of produce in the end of cropping reason (particularly in case of paddy-cultivators). This results in creating a situation of cash crunch for a marginal farmer. Economically, we can term this situation as "Liquidity Constraint" of a farmer who has his produce in form of an asset but he is not willing to sell as of fear to incur losses. So, it may lead him to either compensate his demand by borrowing cash or by reducing consumption level.

Most farmers consider borrowing as their last resort and try to reduce their consumption. Reduction in consumption leads to reduction in investment in an economy. In other words, we can say that if people reduce their consumption for consumer and capital goods; then it's obvious that industries will reduce to invest capital in producing them. As the investment in a country reduces this leads to reduction in the income level of population. In an expanding economy such as India it is a big problem and an opportunity. It is an untapped potential section of society in terms of consumers that will not only increase the consumption level of market but can also play a leading role in increasing the overall income of nation. The Government has launched a new Central Sector Scheme, namely "Pradhan Mantra Kisan Samman Nidhi" (PM-KISAN) in the FY2019-20. PM-KISAN Scheme aims to supplement the financial needs of the small and marginal farmers in procuring various inputs to ensure proper crop health and yields, commensurate with the anticipated arm income at the end of each crop cycle. This would also protect farmers from who fall in the traps of unregulated moneylenders for meeting such expenses and ensure their continuance in the farming activities.

Review of Literature

Parveen *et al.* (2010) ^[13] examined the utilization of agricultural credit by the borrowers in Bangladesh in the year 1999. Results showed that current expenditure on farming was 52.58 percent, capital expenditure on farming was 12.79 percent, family expenditure was 34.60 percent and non-farm business expenditure was 0.03 percent of funds borrowed. It was observed that diversion of funds was seen more in case of small (36.92) and medium (32.69) farmers compared with large (32.17) farmers. Highest amount was diverted for purchasing food and next to repayment of previous debts and minimal diversions was seen in children's education, social ceremonies, repairing houses, medical treatment etc. Chahal (2011) ^[4] examined that utilization pattern of loans granted for different purposes in Haryana. Results showed that out of the total amount, 82.02 percent was used for agricultural purposes and 17.43 percent was diverted for different activities. Among these activities children's education accounted for 36.31 percent marriages for 23.23 percent, construction of houses for 17 percent, health for 8.80 percent, repayment of old dues for 5.57 percent, liquor consumption for 4.35 percent and pre-borrowing expenditure for 3.04 percent of loan amount diverted on an average. Jain (2014) ^[10] examined the utilization pattern of rural credit in tribal women self-help group in Baran district of Rajasthan. Results showed that 70 percent of the respondents were utilizing the loan amount for the purpose it was taken like pickle making, cot making, papad making, stitching, shops, and for making woollen items and the 30 percent of the respondents were diverting the fund. Alexpandi and Rameshkumar (2014) ^[2] examined the utilization pattern of borrowed money for different activities in Madurai district of Tamil Nadu in the year 2010. Results shows that out of the total funds 78.23 percent was utilized for agricultural activities and 21.77 percent was deviated for different activities like 52.54 percent for delay in getting loans, 13.56 percent monsoon failure, 11.86 percent for Social ceremonies, 10.17 percent for clearance of old debts, 8.48 percent for unexpected family expenses, 3.39 percent for other reasons. Sharma and Kumawat (2014) ^[15] examined the utilization of loan amount for different purposes by the borrowers in Jaipur district of Rajasthan. Results showed that

70.59 percent of borrowers utilized the credit for the purpose it was granted, 23.98 percent of the farmers was partially used the credit for productive purpose and 5.43 percent of the borrowed credit was completely diverted. It was observed that out of the total amount which was used for productive purpose highest amount was dedicated for purchasing sprinkler system and lowest amount was used for cultivation purposes. Out of the total amount diverted the highest diversion is seen in repayment of previous loans and lowest is observed to purchase sprinkler system. Baba *et al.* (2015) ^[3] examined the utilization pattern of institutional credit by the farmers in Jammu and Kashmir. Methodology used in the study was OLS. Results showed that 65 to 98 percent of the farmers utilized the funds for productive purpose in different zones of the study area and 1.6 to 34.7 percent of the farmers diverted their funds. The study suggested that to avoid the diversion of the loan amount given for the productive purpose certain amount should be given to the farmers for consumption purpose along with loan amount. Chavan *et al.* (2016) ^[5] analyzed the utilization of agricultural credit (for loans taken-redgram and cotton crops) within commercial and cooperative banks in Karnataka in the year 2015. Methodology used was averages and percentages. Results showed that loan taken for red gram crop in commercial bank was utilized by small and large farmers for productive purposes was 76.78 and 96.97 percent and diversion of loans was 23.22 and 3.03 percent, respectively. In case of cooperative banks loan utilization by small and large farmers for productive purpose was 77.36 and 93.26 percent and diversion of loans was 22.64 and 6.74 percent. In case of cotton crop in commercial bank loan utilization by small and large farmers for productive purpose was 85.72 and 95.51 percent and diversion of loans was 14.28 and 4.49 percent. In cooperative banks loan utilization by small and large farmers for productive purpose was 81.38 and 96.16 percent and diversion of loans was 18.62 and 3.84 percent. It was observed that within productive utilization highest amount was allocated for labour wages, followed by purchasing fertilizers, plant protection chemicals, manures, marketing and handling charges and the least amount was allocated for purchasing seeds.

Selection of Study Area

The sampling type for the study would be non-probability sampling under which Jammu district would be purposively selected from Jammu Region of Jammu and Kashmir UT as it has the highest number of beneficiaries enrolled under PM-KISAN Scheme. Jammu district is sub divided into 7 Sub-division. Out of which R.S. Pura sub-division will be selected for the present study as it has the highest number of beneficiaries among all the sub-divisions of the selected district. Under R.S. Pura sub-division two blocks i.e. R.S. pura and Miran Sahib will be selected purposively as maximum number of beneficiaries in this sub-division are registered in these two blocks.

Methodology

Descriptive analysis is done to analyze one variable at a time (Univariate Analysis). Then we proceed to check the association or relation between two or more variables (Bivariate and Multivariate Analysis). Tabular Methods are used to summarize the data in table form which is a systematic organization of information in grid row and columnar structure. The mostly used tabular format for data

summarization is Frequency table and Cross-tabulation. The Graphical Methods are considered as a visual way of presenting data using charts and graphs. The visuals make the data intuitive and self-understandable. Frequently used visual representation of data are Bar Plot, Histogram, Pareto Chart, Pie Chart, Box Plot, Line Plot, and Scatter Plot. Wilcoxon rank sum test was used to test the hypothesis and significance of the primary data. The null hypothesis stated that there was a significant difference between distribution of funds to agricultural and non-agricultural purposes. It was found that the utilization of funds to agricultural purposes was more than for non-agricultural purposes.

$$Z = \frac{R_1 - n_1(n + 1)/2}{\sqrt{n_1 n_2 V_R / n}}$$

Where, R_1 is the sum of the ranks from group 1; n_1 is the sample size of group 1; n_2 is the sample size of group 2; V_R is the variance of the ranks.

Results and Discussion

Proper utilization of funds intended for agriculture plays a crucial role in the production and development of farmers. The present study conducted to know the proportion of funds utilized for agricultural purposes and diversion of funds to non-agricultural purposes if any, by the sample farmers.

Table 1: Distribution of fund among different categories of beneficiary farmers for agriculture and non-agriculture purposes

Purpose	Categories of farmers			Overall
	Marginal	Small	Semi-medium	
Agricultural purpose				
Land preparation	11772.973	24500	54000	39250
	60.51%	60.62%	59.82%	60.07%
Seeds	397.33784	826.875	1822.5	1324.6875
	2.04%	2.05%	2.02%	2.027%
Fertilizers / FYM	821.16486	1708.875	3869	2788.9375
	4.22%	4.23%	4.29%	4.27%
Pesticides	547.35811	1125.3125	2566.25	1845.78125
	2.81%	2.78%	2.84%	2.83%
Labour cost	4147.027	8575	19800	14187.5
	21.32%	21.22%	21.94%	21.71%
Others	1768.5861	3673.6063	8205.775	5939.690625
	9.09%	9.09%	9.09%	9.09%
Sub-total expenses	19454.447	40409.669	90263.525	65336.59688
	100%	100%	100%	100%
Non-agricultural purpose				
Consumption	1235.62	1809.8496	2808.0316	1951.16782
	76.89%	71.09%	68.09%	70.72%
Children education	152.67	369.9338	731.51512	418.0379733
	9.50%	14.53%	17.74%	15.15%
Medical expenses	32.12	41.47434	60.91148	44.83658333
	2.00%	1.63%	1.48%	1.62%
Social ceremonies	40.34	93.15814	160.29988	97.93124
	2.51%	3.66%	3.89%	3.55%
Others /savings	146.08	231.4314	363.07696	246.8615533
	9.09%	9.09%	8.80%	8.95%
Sub-total expenses	1607	2546	4124	2759
	100%	100%	100%	100%
Grand Total	21061.447	42955.669	94387.525	68095.59688

It was observed from the table 1 that the funds utilized for agricultural purposes was 95.94% and for non-agricultural purposes was 4.05%. According to category of farmers it was observed that, marginal farmers utilized 92.37% of amount for agricultural purpose and 7.63 % for non-agricultural purposes. Small farmers used 94.07% of amount for agricultural purpose and 5.93% for non- agricultural purpose and in case of semi-medium farmers it was 95.63% for agricultural purpose and 4.37% for non-agricultural purpose. From the table, it was evident that the sample respondents utilized 20.83% for labour cost, 57.64 % for land preparation, 1.95 % for seed, and 4.10 % for fertilizers and 2.71 % for

pesticides. It was observed from the table that the highest amount of 70.72% of funds diverted to consumption purposes, 15.15% of funds spent on education, 3.55% percent for social ceremonies, 1.63 % percent for medical expenses and 8.95 % of funds used for other purposes. It was understood from the study that no farmer saved the scheme amount for future use. Overall, it could be said that out of the total funds. Funds utilized for agricultural purpose accounts to 95.95 per cent and for non-agricultural purpose it was 4.05%. These finding are similar with Baba S.H. (2015) [3] in Jammu and Kashmir and Ujjwala B. (2020) in Ranga-reddy district of Telangana.

Table 2: Wilcoxon Signed-ranked test for distribution of funds according to different purposes

Observation	Rank		
Agricultural purposes			
Land preparation	1 ST		
Seeds	7 TH		
Fertilizers / FYM	4 TH	N1=	5
Pesticides	6 TH	N2=	6
Labour cost	2 ND	SUM=	43
Others	3 RD	Expected=	30
Non-agricultural purposes		$\bar{O} =$	5.477226
Consumption	5 TH	Stat=	2.373464
Children education	8 TH	P-Value=	0.008811
Medical expenses	11 TH		
Social ceremonies	10 TH		
Others /savings	9 TH		

Conclusions

This paper has two objectives to evaluate. Firstly, the distribution of funds by beneficiary farmers under sub-categories of farmers as marginal, small and semi-medium farmers in agricultural and non-agricultural purpose within various sub-categories of consumption. Secondly, to identify the priority in that distribution of funds while allocating them among different categories of beneficiary farmers and parameters of utilization. Through the tabular and graphical analysis, we were able to identify the percentage distribution of funds been allocated to the farmers. Among which we found that all categories of beneficiary farmers; marginal, small, and semi-medium had maximum allocation for land preparation (i.e. approximately 60 per cent on an average) for agricultural purpose while for consumption (approximately 70 per cent on an average) which had the highest in non-agricultural purpose for utilization. It was also seen that distribution of funds for land preparation were 60.51 per cent,

60.62 per cent, 59.82 per cent for marginal, small and semi-medium beneficiary farmers; While it was observed that distribution of funds for consumption were 76.89 per cent, 71.09 per cent and 68.09 per cent for marginal, small and semi-medium farmers. To achieve the second objective; i.e. to analyze the priority that was given in distribution of funds by beneficiary farmers, we applied Wilcoxon Sign-Rank test. For this purpose, we had grouped the funds utilized under agricultural purpose as category-I and non-agricultural purpose as category-II. According to the null hypothesis, there would have been no significant difference in distribution of funds between the two categories. But as we observed the resultant P-value was 0.008811 (i.e. P-Value < 0.05). Therefore, we rejected the null hypothesis and concluded that category-I which had funds utilized for agricultural purpose had higher utilization when compared to category-II, i.e. for non-agricultural purpose.

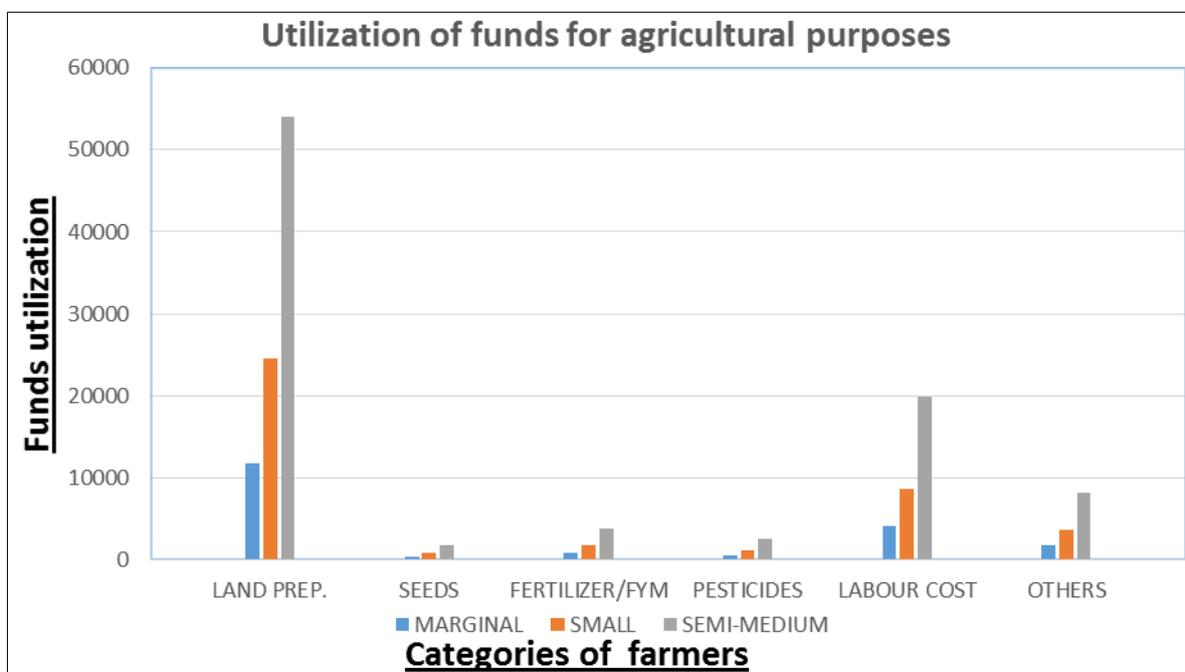


Fig 1: Represent distribution of funds among categories of farmers for agricultural purposes

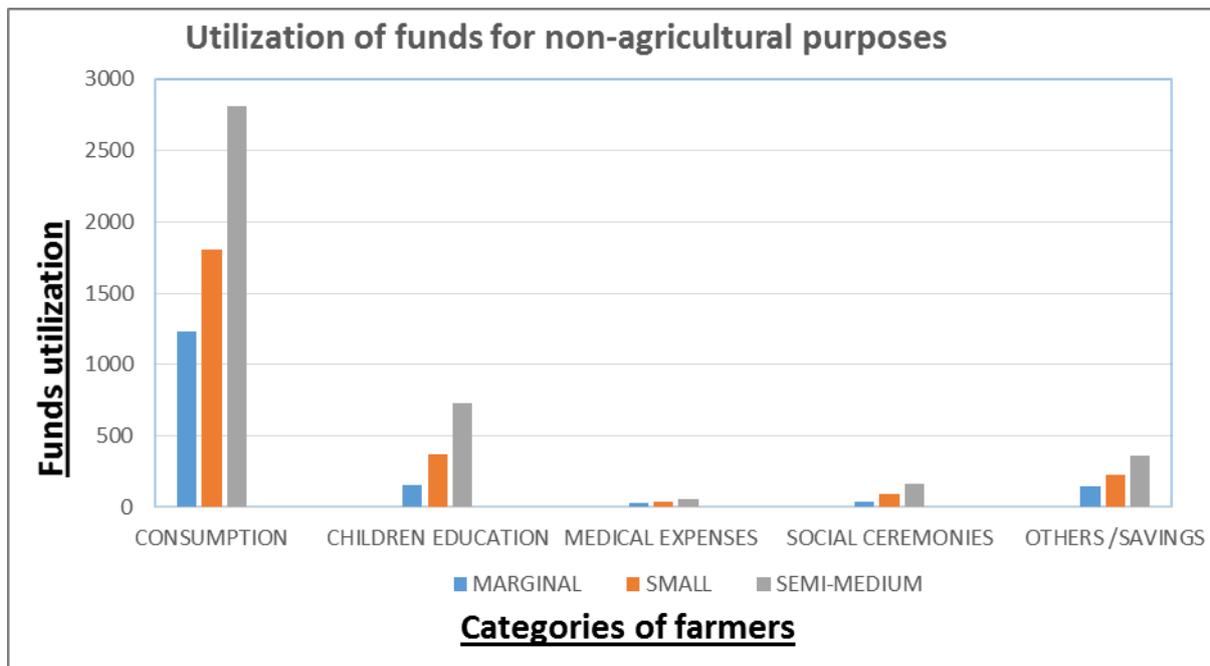


Fig 2: Represent distribution of funds among categories of farmers for agricultural purposes

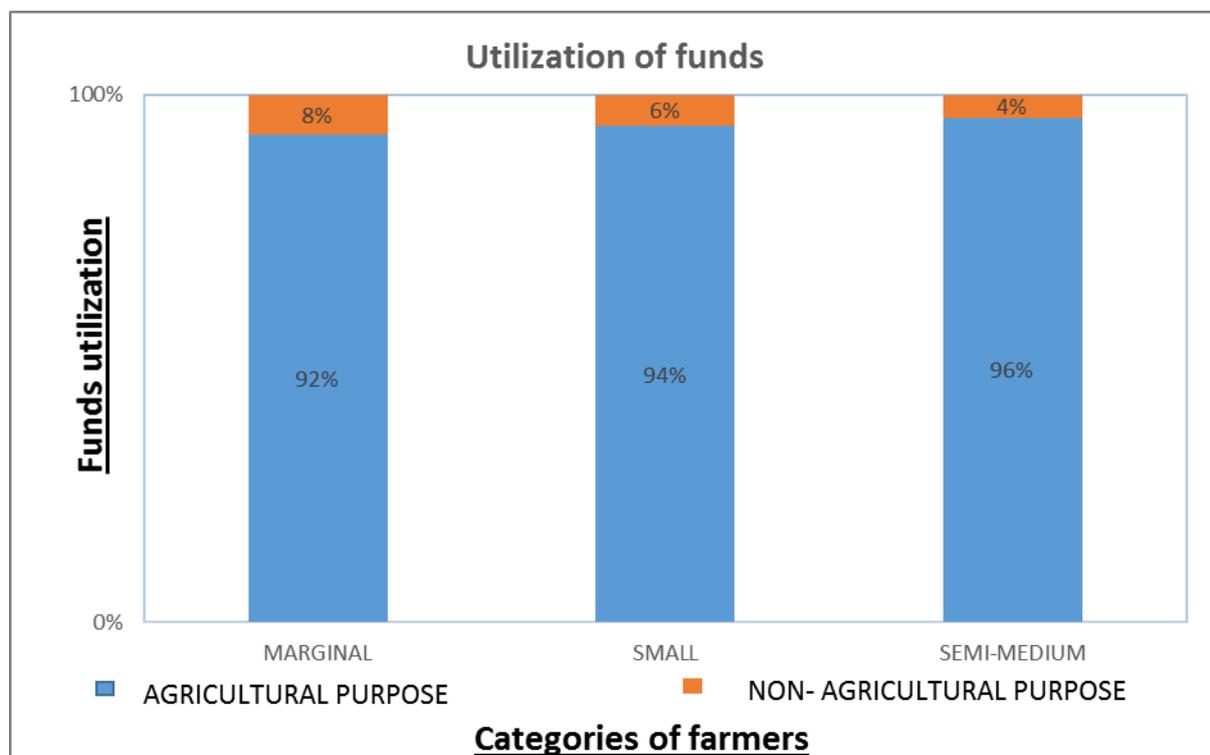


Fig 3: Represent distribution of funds among categories of farmers for agricultural purposes & non-agricultural purposes

References

- Adesina AA. Factors Affecting the Adoption of Fertilizers by Rice Farmers in Côte d’Ivoire. *Nutrient Cycling in Agroecosystems* 1996;46(1):29-39.
- Alexpandi M, Rameshkumar S. Utilisation and Repayment of Agricultural Credit-The Case of Madurai District, Tamil Nadu. *Journal of Rural Development*. 2014;33(2):147-159.
- Baba SH, Wani MH, Zargar BA, Bhat A. DS Gaps, Utilization Pattern and Impact of Institutional Credit to Agriculture in Jammu & Kashmir. *Indian Journal of Economics and Development*. 2015;3(9):1-9.
- Chahal DS. Supply and utilisation pattern of agricultural credit: a study of selected credit institutions of Haryana. Chief patron chief patron, 2011.
- Chavan R, Joshi AT, Patil SS, Hiremath GM. Utilization pattern of agriculture crop loan by farmers in India with special reference to Karnataka. *Indian J Econ Dev*. 2016;4(12):1-6.
- Gertler P. Do Conditional Cash Transfers Improve Child Health? Evidence from PROGRESA’s Control Randomized Experiment. *American Economic Review* 2004;94(2):336-341.
- Gertler P, Martinez S, Rubio-Codina M. Investing Cash Transfers to Raise Long-Term Living Standards. Washington, DC: World Bank, 2006.

8. Handa S, Natali L, Seidenfeld D, Tembo G, Davis B. Zambia Cash Transfer Evaluation Study Team. Can Unconditional Cash Transfers Raise Long-Term Living Standards? Evidence from Zambia. *Journal of Development Economics* 2018;133:42-65.
9. Haushofer J, Shapiro J. The Short-Term Impact of Unconditional Cash Transfers to the Poor: Experimental Evidence from Kenya. *The Quarterly Journal of Economics* 2016;131(4):1973-2042.
10. Jain K. Utilization of rural credit by tribal women self-help group members. *International Journal of Agricultural Extension*, 2014, 127-132.
11. Maluccio JA. The Impact of Conditional Cash Transfers on Consumption and Investment in Nicaragua. *The Journal of Development Studies* 2010;46(1):14-38.
12. Manwar MK. Structural changes in cropping pattern in selected tahsils of Wardha District (Doctoral dissertation, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola.). O'Donoghue, E. J. Do Direct Payments Distort Agricultural Production? A County-Level Analysis (No. 320-2016-10383). 2010.
13. Parveen S, Hasan MR, Lucky RY, Tabassum N. Economic study on patterns of utilization and extent of repayment of agricultural credit in Bangladesh. *Journal of Science and Technology*, 2010, 8.
14. Sadoulet E, de Janvry A, Davis B. Cash Transfer Programs with Income Multipliers: PROCAMPO in Mexico. *World Development*. 2001;29(6):1043-1056.
15. Sharma BK, Kumawat RC. Purpose-wise utilization pattern of agricultural credit in Rajasthan. *Agro-Economist*. 2014;1(1):29-37.
16. Tirivayi N, Knowles M, Davis B. The Interaction between Social Protection and Agriculture: A Review of Evidence. *Global Food Security*. 2016;10:52-62.