

Research Paper

An Economic Analysis of PM Kisan Scheme in Ri-Bhoi District of Meghalaya State

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Received: 06-09-2021

Revised: 26-11-2021

Accepted: 11-12-2021

ABSTRACT

The PM Kisan scheme enables to support the financial needs of all land holding farmers in order to purchase various inputs timely and ensure proper crop health and adequate yields. Keeping this in view, a study was conducted to analyse the economics of PM Kisan scheme for the 2020-21 *Kharif* season in Ri-Bhoi district of Meghalaya. Primary data on cost and returns of the paddy crop (main crop) were collected by interviewing the farmers through personal visits with the help of an especially structured and pre-tested schedule. From the cost and returns calculated, it was found that there was an increase of 2.14 per cent, 4.74 per cent and 8.71 per cent on the cost of cultivation, gross returns and net returns, respectively for beneficiaries than that of the non-beneficiaries in *Kharif* 2020-21. This shows farmer distress has reduced to extent and beneficiary farmers are willing to spend more for better returns. From the study it can be concluded that the beneficiary farmers are somewhat benefited from the PM-Kisan scheme.

HIGHLIGHTS

- ① The Government launched PM Kisan on 1st December 2018 to enhance the income of the Small and Marginal Farmers and later to all landholding farmers with subject to certain exclusion criteria of economic status.
- ① Under the Scheme, direct benefit transfer of ₹ 6000 per year is transferred in three instalments for every four months of ₹ 2000 each into the Aadhar ceded bank accounts for the eligible landholding farmers.
- ① Overall cost of cultivation, gross returns and net returns of beneficiary farmers were higher than that of non-beneficiary farmers.
- ① This shows reduction of financial distress in beneficiary farmers to certain extent and increase in returns from the use of distributed PM Kisan scheme amount.

Keywords: Cost, returns, cost of cultivation, gross returns, net returns, PM Kisan

Realizing the fact that increasing investment requirement by farmers in agriculture is one of the key factors for continued farmers' crisis and with a view to enhance the income of the Small and Marginal Farmers (SMFs) especially, the Government launched a new Central Sector Scheme, namely, "Pradhan Mantri Kisan Samman Nidhi (PM Kisan)" on 1st December 2018. PM Kisan scheme has become an innovative scheme on direct investment support to the farmers through direct cash transfer.

It was found that effective and least distortionary way to support them would be through direct benefit transfers (Shamika, 2018). The scheme extended to cover around 14.5 crores beneficiaries under it, with an increase of 2 crore more farmers from earlier with an overall estimated expenditure of

How to cite this article: Reddy, P.N., Choudhury, A., Singh, R., Sethi, B., Geetarani Devi, L. and Hemochandra, L. (2021). An Economic Analysis of PM Kisan Scheme in Ri-Bhoi District of Meghalaya State. *Economic Affairs*, 66(04): 605-609.

Source of Support: None; **Conflict of Interest:** None



₹ 1.5 lakh crores funded by the Central Government so far {Source: GoI, 2021. (www.pmkisan.gov.in)}. The extended number of beneficiaries is due to revision of the scheme to support the financial needs in which the scheme initially pertained to SMFs and later to all landholding farmers with subject to certain exclusion criteria of economic status. Among all states of India, U.P. has the highest number of beneficiaries and Sikkim has least number of beneficiaries. The scheme enables to support the financial needs of all land holding farmers in order to purchase various inputs and ensure proper crop health and adequate yields. This scheme protects the farmers from moneylenders to meet the expenses and with ensured prosperous farm activities. “The scheme has been one of the big bang in many ways and one of the straight income transfer to farmers, is a small beginning of the universal basic income (UBI)” (*Economic Survey 2016-17*). Under the Scheme, direct benefit transfer of ₹ 6000 per year is transferred in three instalments for every four months of ₹ 2000 each into the Aadhar ceded bank accounts for the eligible landholding farmers. The first instalment started from the period 01.12.2018 to 31.03.2019, under this scheme the amount was transferred in the financial year (2018-19) itself to the eligible beneficiaries and so far nine instalments have been transferred, the ninth being from 01.08.2021 to 31.11.2021.

Under the scheme, for the first time the direct investment support received by the Meghalaya beneficiaries of all districts was about 1.86 lakh farmers at the rate of ₹ 2000 per instalment during 2018-19 agriculture year to the beneficiary bank accounts, same time along with the entire country. With good amount of cultivable area and many natural water bodies for irrigation in relative to other districts of Meghalaya (GoM, 2021), Ri-Bhoi district had promising contribution to state agriculture growth with PM Kisan scheme adding enhancement to the beneficiary farmers. In overall terms, the scheme has been contributing to increased ability in terms of cost of cultivation, gross returns and net returns in comparison with that of beneficiaries to non-beneficiaries which was implying to the reduction of financial distress to certain extent. Similar findings were observed with MGNREGA schemes that reduced rural financial distress by Tabrez *et al.* (2019).

MATERIALS AND METHODS

The present study has been carried out on the basis of primary data collected from the study area. Umsning and Umling blocks of Ri-Bhoi district have been chosen purposively, as they have highest number of beneficiaries of the scheme. Two villages from each block i.e. a total of four villages were selected purposively based on the highest number of beneficiaries in the villages (www.pmkisan.gov.in). The necessary data from 122 sample respondents (91 beneficiaries and 31 non-beneficiaries) was collected through a pre-tested interview schedule. Different cost concepts, cost of cultivation, gross returns and net returns were estimated and tabular analysis was done to obtain the results and draw conclusions regarding the present study. A summary of them used in the present study is as follows:

- ♦ Cost A1: This cost includes value of hired human labour, owned and hired bullock labour, owned and hired machine labour, seeds, fertilizers, farmyard manure, plant protection chemicals, depreciation, land revenue and interest on working capital.
- ♦ Cost A2: Cost A1 + rent paid on leased in land
- ♦ Cost B1: Cost A1 + interest on owned fixed capital assets (excluding land)
- ♦ Cost B2: Cost B1 + Rental value of owned land + Rent paid for leased-in land
- ♦ Cost C1: Cost B1 + imputed value of family labour
- ♦ Cost C2: Cost B2 + imputed value of family labour

Cost of cultivation is being calculated using Cost C2 which is comprehensive including both fixed as well as variable costs.

Gross returns = Value of main product (quantity × price)

Net returns = Gross income – Cost of Cultivation

RESULTS AND DISCUSSION

Cost-returns profile of major crop (paddy) from sample respondents

In this section, an attempt has been made to present the costs and returns of major crop (paddy) for *Kharif 2020-21*. Cost concepts, cost of cultivation,

gross returns and net returns of both beneficiary and non-beneficiary farmers were discussed.

Cost concepts

Cost concepts are essential to calculate cost of cultivation [Cost concepts compiled by Sen and Bhatia (2004) and CACP (2012)]. So Cost A1, A2, B2 and C2 of Paddy of both beneficiary and non-beneficiary farmers were calculated per hectare and presented in Table 1. Among the different costs, Cost C2 was comprehensive which includes fixed as well as variable costs. It acts as basis in comparing different operational land holding sizes. Therefore, Cost C2 has been considered as the basis for cost of cultivation. The costs indicated a positive relationship with the farm size, increased from marginal to small farmers and the costs of beneficiary farmers were found to be higher than non-beneficiary farmers and the percentage difference were was 4.85 per cent, 0.93 per cent, 3.70 per cent and 3.71 per cent for Cost A1, A2, B2 and C2 respectively. This shows that the beneficiaries were spending more as part of inputs because of the support from the scheme when compared to the non-beneficiaries. Similar findings were observed by Sneha (2019) in the investment support scheme similar to PM Kisan scheme.

Cost of cultivation of Paddy for Beneficiary and Non-Beneficiary farmers

The cost of cultivation of paddy per hectare for *Kharif* 2020-21 for beneficiary and non-beneficiary farmers were calculated according to farm size and presented in Table 2. The average cost of cultivation of the beneficiary farmers was ₹ 38805.25 in *Kharif* 2020-21, while that of non-beneficiary farmers was ₹ 37975.75. There was a percentage difference of 2.14 per cent and an absolute difference of ₹ 830, between the beneficiary and non-beneficiaries farmers and. Non-beneficiaries opined that as PM Kisan scheme amount was not available to them, they find the other source of income like private lending.

Further the cost of cultivation of marginal and small beneficiary farmers were ₹ 37452.14 and ₹ 40609.39 respectively during *Kharif* 2020-21, which showed an increasing trend as farm size increases. The costs of cultivation of non-beneficiary farmers for same season were ₹ 36008.64 and ₹ 39515.34 for marginal and small beneficiary farmers respectively. For the marginal farmer category, a percentage difference of 3.86 per cent and an absolute difference of ₹ 1,444 were seen between the beneficiary and non-beneficiary farmers. Similarly, for the small farmer category, a percentage difference of 2.70 per cent, with an absolute difference of ₹ 1,094 were seen between beneficiary and non-beneficiary farmers.

Table 1: Concept wise Cost of cultivation of Paddy for Beneficiaries and Non-beneficiaries farmers during *Kharif* 2020-21 (₹ per ha.)

Particulars	Beneficiaries			Non-Beneficiaries			% Difference
	Marginal farmers	Small farmers	Pooled farmers	Marginal farmers	Small farmers	Pooled farmers	Pooled farmers
Cost A1	16958.87	20315.80	18397.55	15921.8	20015.34	17506.39	4.85
Cost A2	18295.41	21033.74	19468.98	18092.85	21182.01	19288.65	0.93
Cost B2	33099.26	36326.05	34482.17	31979.69	35157.01	33209.62	3.70
Cost C2	37452.14	40609.39	38805.25	36008.64	39515.34	37366.07	3.71

Table 2: Cost of cultivation of paddy by farm size during *Kharif* 2020-21 (₹ per ha.)

Season	Type of farmer	Cost of cultivation (₹/hectare)		Absolute difference (₹)	% Difference
		Beneficiary farmer (n=91)	Non-Beneficiary farmer (n=31)		
<i>Kharif</i>	Marginal (71)	37452.14	36008.64	1,444	3.96
	Small (51)	40609.39	39515.34	1,094	2.70
	Pooled (122)	38805.25	37975.75	830	2.14

Gross returns from the cultivation of Paddy for the Beneficiary farmers and Non-Beneficiary farmers.

From the Table 3, it can be seen that the overall farmers' gross returns were ₹ 64103.85 and ₹ 61070.97 with a percentage difference of 4.74 per cent and an absolute difference of ₹ 3,033 for beneficiary farmers and non-beneficiary farmers, respectively. Like cost of cultivation, gross returns also increases with size of the land holding during study period, i.e. from ₹ 53127.88 among marginal farmers to ₹ 78738.46 among small farmers for the beneficiary farmers. Similar trend was also followed among non-beneficiary farmers. There were 2.33 per cent and 3.99 per cent differences in the gross returns between the beneficiary and non-beneficiary farmers for marginal and small farms respectively. This is pertained to the better utilization of resources at right time by small farmers when compared to marginal farmers and their awareness towards PM Kisan scheme and other schemes introduced by the government.

Net returns from the cultivation of paddy for the Beneficiary farmers and Non-Beneficiary farmers

In order to calculate net returns, cost of cultivation is deducted from gross returns. The net returns

of beneficiary and non-beneficiaries during *Kharif* season 2020-21 are presented in Table 4. The average net returns of marginal and small beneficiary farmers were ₹ 15675.74 and ₹ 38129.08 respectively. The net returns depicted a positive and direct relationship with size of the farm as seen in the case of gross returns. Similar pattern was observed among non-beneficiary farmers, the net returns increases with increase in farm size from ₹ 14686.1 for marginal farmers to ₹ 36084.66 for small farmers. There were percentage differences of 6.32 per cent and 5.37 per cent, with an absolute difference of ₹ 990 and ₹ 2,044 between the beneficiary and non-beneficiary farmers for marginal and small farms respectively.

Apart this, it was obvious that the net returns of beneficiary farmers was higher than non-beneficiary farmers like in the case of cost of cultivation and gross returns. The average net returns of beneficiary farmers was ₹ 25298.6 which was greater than that of non-beneficiary farmers (₹ 23095.22) with a percentage difference of 8.71 per cent and an absolute difference of ₹ 2,203. This pertains to the reduced financial distress in beneficiary farmers to certain extent from the distribution of PM Kisan scheme amount. Similar findings were observed with government schemes in Meghalaya by Dkhar *et al.* (2019).

Table 3: Gross returns from the cultivation of paddy for the beneficiary farmers and non-beneficiary farmers during *Kharif* 2020-21

Season	Type of farmer	Gross returns (₹/hectare)		Absolute difference (₹)	% Difference
		Beneficiary farmer (n=91)	Non- Beneficiary farmer (n=31)		
<i>Kharif</i>	Marginal (71)	53127.88	51894.74	1,233	2.33
	Small (51)	78738.46	75600.00	3,138	3.99
	Pooled (122)	64103.85	61070.97	3,033	4.74

Table 4: Net returns from the cultivation of paddy for the beneficiary farmers and non-beneficiary farmers during *Kharif* 2020-21

Season	Type of farmer	Net returns (₹/hectare)		Absolute difference (₹)	% Difference
		Beneficiary farmer (n=91)	Non- Beneficiary farmer (n=31)		
<i>Kharif</i>	Marginal (71)	15675.74	14686.10	990	6.32
	Small (51)	38129.08	36084.66	2,044	5.37
	Pooled (122)	25298.60	23095.22	2,203	8.71

CONCLUSION

The average cost of cultivation of the beneficiary farmers was ₹ 38805.25 in *Kharif* 2020-21. Whereas, that of non-beneficiary farmers for same season was ₹ 37975.75, which was less when compared to that of beneficiary farmers. With the PM Kisan scheme it was found that a difference of 2.14 per cent, with an absolute difference of ₹ 830 increase in the cost of cultivation. The average gross returns for beneficiary farmers were ₹ 64103.85 whereas that of non-beneficiary farmers was ₹ 61070.97 during *Kharif* 2020-21. A difference of 4.74 per cent and an absolute difference of ₹ 3032.88 in the gross returns were observed between the beneficiary and non-beneficiary farmers. The average net returns of beneficiary farmers was ₹ 25298.6 which was greater than that of non-beneficiary farmers i.e., ₹ 23095.22 during *Kharif* 2020-21. A difference of 8.71 per cent and an absolute difference of ₹ 2203 in the net returns were observed between the beneficiary and non-beneficiary farmers. Overall cost of cultivation, gross returns and net returns of beneficiary farmers were greater than that of non-beneficiary farmers. This shows reduction of financial distress in beneficiary farmers to certain extent and increase in returns from the use of distributed of PM Kisan scheme amount. From the study it can be concluded that the beneficiary farmers are somewhat benefited from the PM-Kisan scheme.

Limitations and Future studies

Ri-Bhoi district is one of the backward districts of Meghalaya. Only a small part of the district had been covered in this study. Also because of time and resource constraint, the study was confined to four villages only. Results of this study cannot be generalized beyond the limits of study area which do not have similar conditions, either regarding environmental, situational or infrastructural position as the areas under this study. Therefore, there is ample scope for future studies in the following areas –

- ♦ The similar study may be conducted in larger areas to test genuinity and consistency of the present findings and also to arrive at some generalization of findings, which can help in policy formation.
- ♦ Comparative study on the performance of the scheme can be made for the different districts of the state of Meghalaya.

- ♦ Comparative study on the performance of the scheme can be made for the different states of the North-eastern India.

ACKNOWLEDGEMENTS

The authors of the study are grateful to the Central Agricultural University, Imphal for providing the resources necessary to perform this master's research in the field of agricultural economics, from which this manuscript was derived.

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