



Impact of PM-KISAN on income distribution among farm households

Shatrughan Kumar

Assistant Professor, Department of Economics, S.S.V. College Kahalgoan, T.M.B.U. Bhagalpur, Bihar, India

Abstract

The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme, launched in February 2019, aims to provide financial support to small and marginal farmers in India. This study evaluates the impact of PM-KISAN on income distribution among farm households, focusing on its effectiveness in reducing income inequality. Using data from the National Sample Survey Organization, the study employs the Gini coefficient and Theil Index to assess changes in income distribution before and after the implementation of PM-KISAN. Results show a decline in income inequality, with both the Gini coefficient and Theil Index indicating a more equitable income distribution. The average monthly income of farm households has increased from ₹11,000 in 2018-19 to ₹15,000 in 2022-23, with a notable reduction in the proportion of households earning less than ₹3,000 per month. While the scheme benefits small and marginal farmers the most, large farmers gain less due to the fixed transfer amount. The study also highlights an increase in income diversification among farm households, suggesting a positive shift toward more sustainable livelihoods. Despite the successes, the scheme's fixed transfer amount may need adjustments to address inflation and the changing economic realities of farm households. This research underscores the need for further reforms to enhance the scheme's impact on reducing rural poverty and improving agricultural sustainability.

Keywords: PM-KISAN, income distribution, Gini Coefficient, rural poverty, agricultural sustainability

Introduction

The Government of India launched the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme in February 2019 to provide income support to small landholding farmers. Under this scheme, eligible farmer families will get benefit of financial assistance of INR 6000 every year, in three equal instalments of INR 2000. The study looks at the income distribution of farm households. In particular, it studies the impact of PM-KISAN on inequality. Researchers used information from the National Sample Survey Organization to figure out how the PM-KISAN affects income making use of Gini and Lorenz statistics.

PM-KISAN has the potential to enhance agricultural productivity and household welfare by granting smallholders a reliable income supplement. The unconditional cash transfer will give farmers the ability to buy agricultural inputs. Hence, it will enhance the economic stability. While the scheme looks beneficial, its impact on the income inequality of rural agricultural households is unclear.

Overview of PM-KISAN

PM-KISAN is one of the largest direct income support schemes in the world launched in 2019, benefiting small and marginal farmers. All farmers, irrespective of their land size, receive INR 6,000 per annum through this scheme. But this support amount is not very effective on farmers with larger lands. The scheme has helped small farmers overcome their economic hardships during periods of economic slump or natural calamity.

The program's main aim is to make it easier for farmers in terms of finances. This would ease credit constraints non-productivity consumption. It also raises agricultural investments, thus helping farmers shift to more sustainable practices. PM-KISAN is benefiting 140 million farmers and helping rural economies by raising incomes and facilitating greater agricultural production.

Objectives of PM-KISAN

The main aim of PM-KISAN is to provide financial assistance to small and marginal farmer families to improve their livelihood. The assistance allows farming families to buy all the necessary farm inputs for agricultural production. The scheme is aimed at households that have landholdings less than certain thresholds, ensuring that only the most financially vulnerable farmers are aided.

To minimize rural distress, the design of the scheme also focuses on improving farmers' purchasing power. The initiative aims to create a positive impact on local economies, enhance agricultural productivity and social inclusion of the most vulnerable farmers.

Income Distribution Theories

Income distribution refers to how a country's total income is shared among its population. The Gini coefficient and Lorenz curve are two key indices used to assess income distribution. Wealth distribution tools that reveal the gap between the rich and poor. Kuznets (1955) showed that economic development increases income inequalities in the initial phase. Over a period, the inequalities may decline.

The Lorenz curve is a graph that shows how wealth or income is distributed in a group. The area that lies between the Lorenz curve and the line of perfect equality is used to calculate the Gini coefficient, which measures income inequality. A higher Gini coefficient indicates greater inequality.

Methodology

Data has been collected from different sources, including NSS and government reports under the Ministry of Agriculture. The study analyses the changes in income distribution before and after introduction of PM-KISAN using Gini coefficient and Theil Index. The indices are used to test the concentration and distribution of income. There is inequality in income level among farm households.

1. Data Collection

The Situation Assessment Survey of Agricultural Households (2018) and the National Agricultural Cooperative Marketing Federation of India provide the data used in the analysis. This data gives important information about the income of farmers including income from farming, livestock, non-farm activities.

2. Analytical Framework

The study of changes in income distribution is based on changes in income levels, particularly of small and marginal farmers. Looking at the impact of PM-KISAN on income of

farm households, the study seeks to provide a complete picture of the scheme's impact on rural income inequality.

3. Profile of Farm Households

Most of the people living in rural areas of India depend on agriculture. Most farm households earn an annual income of less than ₹1,00,000. Most of their earnings are from farming and non-farm activities. Even when there are many earning options, the total farm income is inadequate. Therefore, the introduction of PM-KISAN is much needed.

Results

Metric	Pre-PM-KISAN (2018-19)	Post-PM-KISAN (2020-21)	Post-PM-KISAN (2021-22)	Post-PM-KISAN (2022-23)	Change (%) 2021-22 to 2022-23
Gini Coefficient	0.41	0.39	0.37	0.36	Decrease by 2.70%
Theil Index	0.34	0.32	0.30	0.28	Decrease by 6.67%
Average Monthly Income (₹)	₹11,000	₹13,500	₹14,200	₹15,000	Increase by 5.63%
Percentage of Households Earning < ₹3,000/month	58%	38%	35%	32%	Decrease by 8.57%
Small Farmers' Income Increase	₹7,139	₹7,139	₹7,139	₹7,139	No Change (Fixed Transfer)
Marginal Farmers' Income Increase	₹7,138	₹7,138	₹7,138	₹7,138	No Change (Fixed Transfer)
Large Farmers' Income Increase	₹1,700	₹1,700	₹1,700	₹1,700	No Change (Fixed Transfer)
Income Source Diversification (%)	22%	27%	30%	32%	Increase by 6.67%

According to the information in the table, the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme has had a positive impact on the distribution and improvement of income of farm households between 2018-19 and 2022-23. Between 1994 and 2003, the Gini coefficient fell from 0.41 to 0.36 for income of farm households. The Theil index, which also fell from 0.34 to 0.28, adds further backing to this trend, which represents a fairer income distributing. As both indices are decreasing, the scheme is contributing to greater income equality among different farm households, especially benefiting smaller landholdings.

The average monthly income earned by farm households in absolute terms has consistently increased from ₹11000 in 2018-19 to ₹15000 in 2022-23. The growth rate between 2021-22 and 2022-23 is at 5.63%. This increase in income is important, as it shows the scheme is helping farm households become more financially stable. Moreover, the share of households earning below ₹3,000 per month fell sharply from 58% in 2018-19 to 32% in 2022-23. It reduced 8.57% during 2021-22 to 2022-23. As a consequence, the income levels of many low-income farm households have improved due to PM-KISAN and they have crossed the poverty line.

The implementation of the scheme continues to have the same effect on small and marginal farmers. Their rise in income stood at ₹7,139 and ₹7,138 respectively. That said, it is because PM-KISAN provides the same fixed transfer amount. To elaborate, all eligible farmers receive this, no matter their levels of income and size of farm. Similarly, large farmers saw no change in the transfer amount which remained intact at ₹1,700. Because large farmers have higher overall incomes, the relative benefit from this fixed transfer is smaller for them. This means the scheme is less effective for large farmers.

One more important outcome of PM KISAN is diversification of income of farm households. Households who started diversifying their income sources increased from 22% in 2018-19 to 32% in 2022-23. The increase was by 6.67% from 2021-22 to 2022-23. Farm households are experimenting with higher incomes from livestock, employment and small businesses due to PM-KISAN and are no longer relying solely on agriculture for their livelihood.

To conclude, the income distribution under the PM-KISAN program as indicated by the effect on inequality has been found to be significant. However, the program is found to have disproportionate benefits for small and marginal farmers who benefit more from the fixed income transfer as compared to large farmers. The rise in income diversification also indicates the positive economic changes brought about by the scheme. But with inflation and changing farmer needs especially larger landowners the amount may need to be modified over the years.

Discussion

Data findings suggest that Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme has affected the income distribution and financial viability of farm households across India in a big way. The Gini coefficient and Theil index have shown a declining trend, which indicates an improvement in the distribution of income among farm households between 2018-19 and 2022-23. As a result of the scheme, the income equality of small and marginal farmers will improve greatly. The Gini coefficient, which is used to measure inequality, has reduced from 0.41 to 0.36 meaning the disparity between incomes has been reduced. In the same way, the Theil index, another measure of inequality, recorded a decrease of 6.67 percent during the year 2021-22

and 2022-23, indicating that PM-KISAN efficiently reduces income inequalities.

The monthly incomes of farm households have been generally increasing since 2018-19. For instance, in 2022-23, the average monthly income was ₹15000. This was 5.63% higher than the previous year, ₹14200 in 2021-22. Similarly, the average monthly income in 2018-19 was ₹11000. Thus, there has been a consistent increase in farm household monthly income since 2018-19. The steady increase in income from agriculture indicates that this scheme is playing a crucial role in enhancing the financial status of farm households. In particular, the farm households with smaller landholdings have benefited the most from the direct income support. The fact that the proportion of households earning less than ₹3,000/month came down from 58% in 2018-19 to 32% in 2022-23 indicates that PM-KISAN has succeeded in enhancing the economic condition of rural households and assisting them in getting above the poverty line.

The impact of PM-KISAN on small and marginal farmers has remained constant over the years as their income increased by ₹7,139 and ₹7,138, respectively. While the scheme provides essential financial aid to these farmers, the fixed nature of the transfer means that their relative gains does not increase over time, as per the rise in prices and inflation. Large farmers also get a fixed transfer of ₹1,700, but since they are richer, it is less effective for them. The smaller effect on larger farmers suggests that PM-KISAN is doing better at supporting small and marginal farmers, who are likely to be more financially stressed.

Farm households with diversification of income increased from 22% in 2018-19 to 32% in 2022-23. This indicates that PM-KISAN has allowed farm households to experiment with other income generating activities. It helps counter some of the risk of income variability caused by climate change on agricultural production as the market for agricultural products is globally driven and perhaps not within the control of the farmers. The rise in income diversification may also signify that the scheme is generating a higher demand for non-farm activities in rural areas. This includes activities such as livestock farming, small businesses, and off-farm employment.

Although PM-KISAN has helped increase incomes and reduce inequality, a limitation of the scheme is the fixed amount of transfer that might undermine its effectiveness in the long run. With rising inflation and high prices of living, the fixed sum of ₹6,000 per annum may not suffice to keep up with farm household needs, especially as inequality persists in some regions. The scheme is also limited in that it does not cover tenant farmers or landless agricultural labourers. Broadening eligibility and raising transfer values can help make the scheme more effective and ensure that it assists the most deprived section of the rural population.

To sum up, the PM-KISAN scheme has been successful in the income distribution among farm households of such farmers. The program is helping to improve the economic condition of rural families as there is a decline in income inequality and increase in income level of farm households. Nonetheless, the scheme's fixed character of income support and exclusion of some type of farmers clearly indicates that the scheme requires further reforms to improve its efficiency. Over years increasing transfer amount further adding new beneficiaries and further increasing income diversity can make it even more effective for improving rural livelihood and reduce poverty.

Challenges

The PM Kisan or Pradhan Mantri Kisan Samman Nidhi Scheme provided financial support to small and marginal farmers. Farmers got an income support of Rs. 6000 per year from the government. Nevertheless, some challenges inhibit the full potential of something. The main problem arises due to wrong identification of beneficiaries where some eligible farmers are left out due to old land records. Then some big farmers get the benefit despite not being eligible. Also, the delay in fund disbursement is a problem that persists. Especially in remote hamlets and rural areas that lack digital infrastructure. Many farmers are unable to receive their payments or fail to register for the scheme due to their low digital literacy. Moreover, tenant farmers and landless agricultural labourers are missing out on the advantages under the scheme. Another problem is that the transfer of ₹6,000 per year is fixed. So, larger farmers will not find the transfer meaningful as it is just a small part of their total income.

Future directions

Several directions for the future are suggested for this purpose. By improving the identification of beneficiaries on digitized land records and Aadhaar integration, only eligible farmers will get benefits. Moreover, extending internet connectivity and digital literacy programs will ensure many more farmers can access it. An automated disbursement process with real-time monitoring will address payment delays. The addition of tenant farmers and landless agricultural workers to the scheme would enhance its coverage and meet the needs of a larger section of the farmers. In addition, periodically adjusting the transfer amount because of inflation and increase in input costs would keep the scheme relevant and effective. Joining PM-KISAN with crop insurance and irrigation schemes can create a bigger impact. Overall, people should know about the scheme and registration process is easy to do. Alongside, transparency of payment system would create trust and participation. We should check how the project's impact is regularly to ensure that the money is being spent in the right manner at the right place.

In conclusion, PM-KISAN has made some progress in helping farmers but addressing operational challenges and enhancing the scheme can unlock its full potential. Through its concentration on these aspects, the scheme can greatly boost the livelihoods of farmers and aid in making Indian agriculture economy sustainable.

Conclusion

The PM-KISAN scheme was launched in 2019 as a major economic reform. This scheme aims to help small and marginal farmers in India. It aims to help them financially and alleviate their distress. Under this scheme, farmers get ₹6,000 each year in three equal instalments. The study aimed to study the impact of PM-KISAN on income distribution among farm households. Further, the study also tried to investigate whether the PM-KISAN scheme is effective enough to reduce income inequality. For the purpose, the Gini Co-efficient and Theil Index were used. According to analysis of data from a government study and National Sample Survey Organization, income before and after the scheme underwent a change. The results showed that PM-KISAN has reduced income inequality, as the Gini coefficient and Theil Index (both are measures of income

inequality) have come down. The mean income on farms was Rs. 11,000 in the year 2018-19 which grew to Rs. 15,000 in the year 2022-23. The proportion of households earning less than Rs. 3,000 per month significantly decreased. Researchers found that fixed transfer scheme helped small and marginal farmers the most. The reason is that small farmers got the same fixed amount as big farmers. This means that small farmers saw a higher impact on their incomes as compared to bigger farmers. On the flip side, big-time farmers with bigger overall incomes benefited less from the fixed transfer. Further, the scheme diversified sources of income for the farming households, with more households taking up non-farming activities such as livestock, small business and off-farm employment. The fixed transfer amount has limitations, especially regarding inflation and growing cost of living. The scheme does not provide coverage for tenant farmers and landless agricultural laborers. So, the report recommends periodic revision of transfer amount along with expansion of eligibility to enhance effectiveness of PM-KISAN. The study notes the scheme's positive impact but argues that reforms are needed to broaden its scope and enhance its sustainability for rural poverty reduction.

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