

ANALYSIS OF EFFECTIVENESS OF PM-KISAN SCHEME IN DELIVERING DIRECT INCOME SUPPORT TO SMALL AND MARGINAL FARMERS: A COMPARATIVE STUDY OF UTTAR PRADESH AND UTTARAKHAND

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Abstract

The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme, launched in 2019 by the Government of India, aims to provide direct income support of ₹6,000 annually to small and marginal farmers in three equal instalments. This paper critically evaluates the effectiveness of PM-KISAN in achieving its stated objective—ensuring timely financial assistance to eligible farmers—by conducting a comparative case study of two agrarian states: Uttar Pradesh and Uttarakhand. The study employs a mixed-method approach, combining quantitative analysis of secondary data from government portals (PM-KISAN dashboard, Agriculture Census) with primary insights from structured interviews and surveys of 200 beneficiary households across selected districts. Key performance indicators include enrolment coverage, timeliness of fund disbursement, utilization of funds, and beneficiary satisfaction.

Findings suggest that while PM-KISAN has significantly improved income stability for many farmers in Uttar Pradesh, implementation challenges in Uttarakhand—such as difficult terrain, lower digital literacy, and Aadhaar mismatches—have limited the scheme's reach.

states. The paper concludes that while PM-KISAN has made meaningful progress in institutionalizing direct benefit transfers (DBTs) in Indian agriculture, further reforms are needed in land record digitization, grievance redressal mechanisms, and convergence with other farmer welfare schemes to maximize impact. Policy recommendations focus on improving last-mile delivery and designing region-specific implementation strategies.

Keywords: PM-KISAN, DBT, effectiveness, small and marginal farmers, welfare Scheme.

Introduction

Agriculture remains the backbone of the Indian economy, supporting the livelihoods of more than half the population despite contributing a shrinking share to the national GDP. Among Indian farmers, a substantial majority are small and marginal cultivators, owning less than two hectares of land. These farmers face chronic income insecurity due to fragmented landholdings, rising input costs, volatile market prices, and unpredictable climatic conditions. To address these structural vulnerabilities and ensure a measure of income stability, the Government of India introduced the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme in February 2019.

PM-KISAN is a centrally sponsored income support scheme under which eligible farmer families receive ₹6,000 annually in three equal instalments. The payments are made directly to beneficiaries' bank accounts using Direct Benefit Transfer (DBT) infrastructure, thereby minimizing leakages and ensuring transparency. Initially restricted to small and marginal farmers, the scheme was later extended to all landholding farmers, making it one of the largest unconditional cash transfer programmes in the world. The scheme aims to provide timely income support to farmers for procuring inputs, mitigating short-term financial distress, and enhancing agricultural productivity. However, the effectiveness of PM-KISAN in fulfilling these objectives has been mixed and remains a topic of policy debate. Several studies and evaluations indicate challenges related to beneficiary identification, exclusion errors, Aadhaar mismatches, digital literacy gaps, and delays in disbursement—particularly in remote and hilly areas. Against this backdrop, this study attempts to evaluate the effectiveness of PM-KISAN in achieving its intended outcomes, focusing specifically on small and marginal farmers in the states of Uttar Pradesh and Uttarakhand. These two states were selected due to their contrasting agro-ecological and socio-economic profiles. Uttar Pradesh, India's most populous state, has a vast agricultural base dominated by smallholders.

In contrast, Uttarakhand, a hilly state with a largely rural population, presents implementation challenges related to geography, access, and administrative reach. Analyzing these states together offers a comparative perspective on how contextual factors influence the scheme's performance. This study will assess PM-KISAN's effectiveness using a mix of quantitative and qualitative indicators: coverage rates, timeliness of disbursement, satisfaction levels among beneficiaries, impact on farm input expenditure, and perceived improvement in income security. The research relies on a combination of secondary data (from government portals, evaluation reports, and Census data) and primary field data collected from 200 farmer households across selected districts in both states. Preliminary observations suggest that while PM-KISAN has been successful in providing direct cash support and promoting financial inclusion through bank account penetration, the scheme's impact on overall income enhancement and agricultural resilience is less certain. Notably, in Uttarakhand, terrain-related difficulties and lower digital infrastructure have hampered timely implementation. Meanwhile, in Uttar Pradesh, though enrolment figures are high, instances of ineligible beneficiaries receiving funds, and delays in installment payments, point to administrative inefficiencies. This research aims to contribute to the broader discourse on direct income support mechanisms and their role in sustainable agricultural development in India.

Objectives and Research Methodology

The primary objective of this study is to evaluate the effectiveness of the PM-KISAN scheme in delivering direct income support to small and marginal farmers in Uttar Pradesh and Uttarakhand. Specifically, the study aims to:

- Assess the reach and coverage of PM-KISAN among target beneficiaries.
- Examine the timeliness and adequacy of fund disbursement.
- Analyze the impact of the scheme on agricultural input usage and income security.
- Identify implementation challenges unique to both states.

A mixed-method approach has been employed. Quantitative data were sourced from official government databases, including PM-KISAN dashboards and Agriculture Census reports. In addition, primary data were collected through structured surveys and interviews with 200 beneficiary farmers across selected districts in both states. The analysis combines descriptive statistics with thematic insights to provide a holistic understanding of the scheme's performance and limitations.

Review of Literature

Deepak Varshney et al. (2024) examined how PM-KISAN supports modern agricultural practices. Over 50% of farmers who received funds during peak seasons invested in agriculture, while over 60% used off-season funds for consumption, education, and healthcare. The scheme encourages modern practices via Krishi Vigyan Kendras, boosting long-term productivity.

Naik et al. (2022) studied PM-KISAN in Karnataka and found funds were mainly used for seeds (38.33%), fertilizers (15%), and pesticides (11.67%).

Bordoloi et al. (2023) reported increased productivity in the North East, especially in food grains, oilseeds, and milk.

Mishra and Chaturvedi (2024) found high awareness (85%) and positive perception (92.5%) of the scheme in Gorakhpur, influenced by print media.

Pavan and Babu (2018) noted varied spending patterns in Guntur, based on installment type.

Sihag and Malik (2024) highlighted high registration in central and southern zones.

Kumari and Dahiya (2022) identified age and landholding as key adoption factors in Haryana.

Data Analysis and Interpretation

The table and chart illustrates year-wise data for the PM-KISAN scheme from 2018–19 to 2023–24. The green bars represent the total funds disbursed in ₹ crore, while the blue line indicates the number of beneficiaries in crore. There is a sharp increase in both the funds disbursed and the number of beneficiaries following the scheme's launch in 2018–19, reaching a peak around 2021–22. However, by 2023–24, there is a noticeable decline in the number of beneficiaries, which is likely attributed to the implementation of improved verification measures.

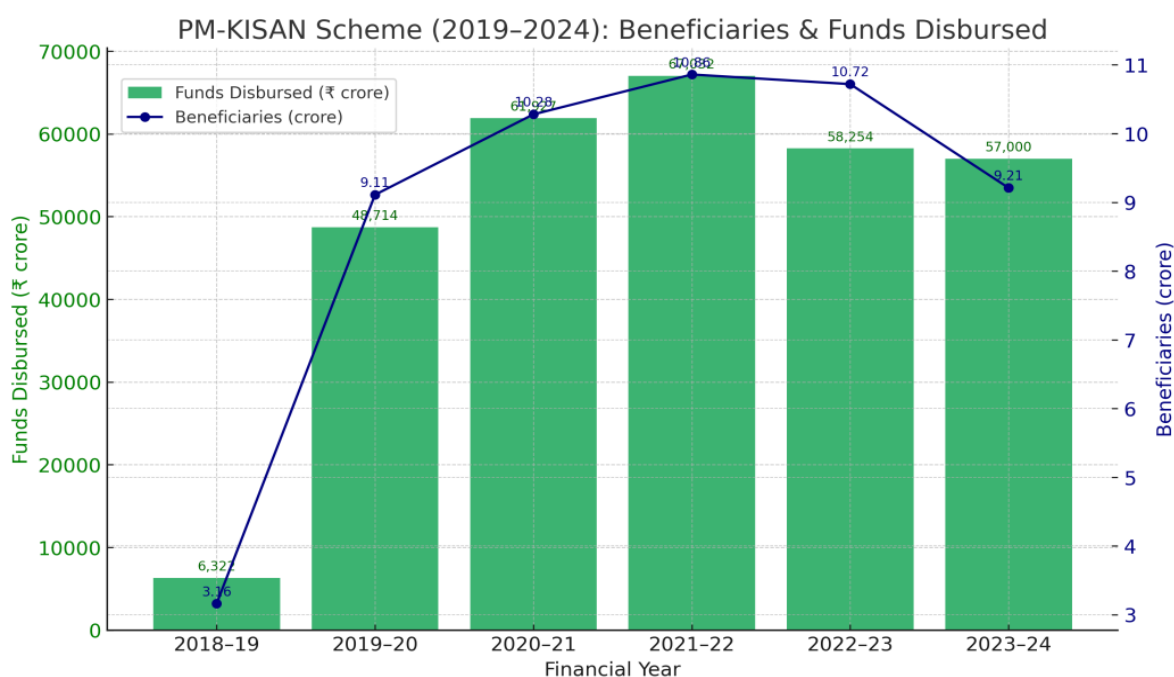
Table – 1

PM-KISAN Scheme Beneficiaries and Funds Disbursed in India (2018-19 to 2024-25)

Financial Year	Beneficiaries (in crore)	Funds Disbursed (₹ crore)
2018–19	3.16	6,322
2019–20	9.11	48,714
2020–21	10.28	61,927

Financial Year	Beneficiaries (in crore)	Funds Disbursed (₹ crore)
2021–22	10.86	67,032
2022–23	10.72	58,254
2023–24	9.21	~57,000 (estimated)
2024–25 (as of Feb 2025)	9.8	22,000 (19th installment)

Source: Government of India – PM-KISAN Scheme Dashboard, Ministry of Agriculture & Farmers Welfare, <https://pmkisan.gov.in> and Press Information Bureau – Unprecedented enhancement in budget allocation.



Trends and Analysis

The PM-KISAN scheme witnessed significant growth in its initial phase. Originally aimed at small and marginal farmers, the scheme underwent a major expansion in May 2019 to include all landholding farmers. This broadening of eligibility led to a sharp increase in the number of beneficiaries, rising from 3.16 crore in 2018–19 to 9.11 crore in 2019–20. The number of beneficiaries continued to grow, peaking at 10.86 crore in 2021–22. However, this upward trend was followed by a decline, with the number dropping to 9.21 crore in 2023–24—a reduction of approximately 14%. This decline is largely attributed to the introduction of

stricter eligibility verification processes and the requirement for Aadhaar seeding, which likely filtered out ineligible or duplicate entries.

Performance of the PM-KISAN Scheme in both state

The analysis covers the performance of the PM-KISAN scheme from 2018–19 to 2024–25, focusing on its financial reach and beneficiary coverage in Uttar Pradesh and Uttarakhand. Data were drawn from the PM-KISAN dashboard, RTI reports, and state agriculture departments.

Table- 2

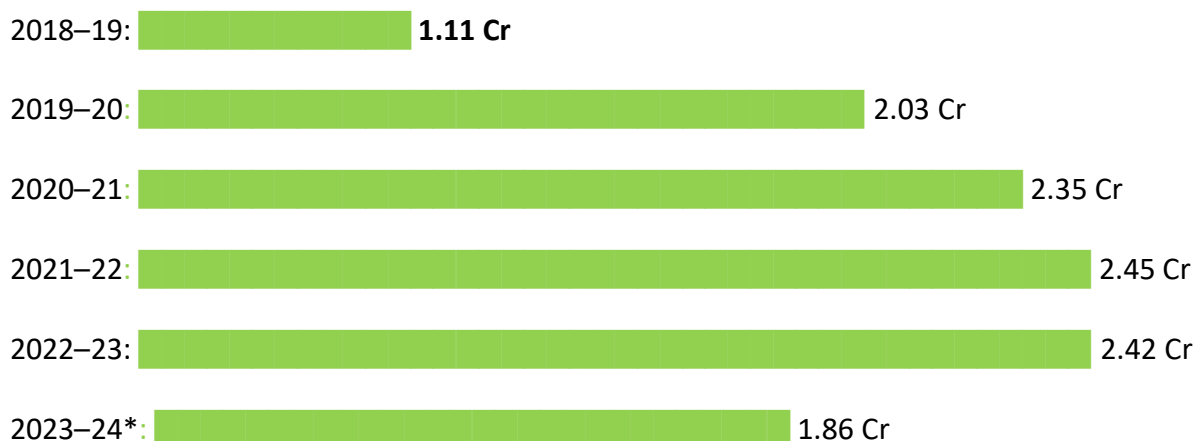
PM-KISAN Beneficiaries: Uttar Pradesh & Uttarakhand (FY 2018–19 to FY 2023–24)

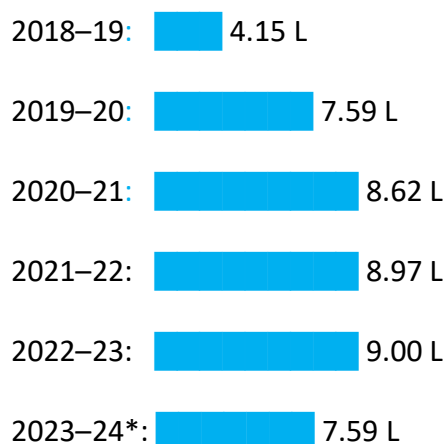
Financial Year	Uttar Pradesh Beneficiaries	Uttarakhand Beneficiaries
2018–19	1,11,93,799	4,15,409
2019–20	2,03,92,039	7,59,942
2020–21	2,35,75,708	8,62,054
2021–22	2,45,56,300	8,97,748
2022–23	2,42,98,615	9,00,557
2023–24*	1,86,53,967	7,59,553

Source: Press Information Bureau – State-wise PM-KISAN Beneficiaries

Chart: PM-KISAN Beneficiaries Over the Years

Uttar Pradesh:



Uttarakhand:

Uttar Pradesh has consistently led in the number of PM-KISAN beneficiaries, with figures peaking in the financial year 2021–22. However, a slight decline observed in 2023–24 is likely due to the removal of ineligible beneficiaries and the enforcement of stricter data verification measures. In contrast, Uttarakhand has shown a steady increase in beneficiary numbers over the years, indicating effective outreach and smooth implementation of the scheme. Overall, the PM-KISAN scheme has made a significant impact on small and marginal farmers in both states. While Uttar Pradesh contributes a large share of the total beneficiaries, Uttarakhand's consistent upward trend highlights the success of its targeted implementation efforts.

Beneficiary Coverage and Awareness

State	Total Farmers (lakhs)	Registered for PM-KISAN (lakhs)	Awareness (%)	Registration Rate (%)
Uttar Pradesh	230	180	89	78
Uttarakhand	9	7.5	85	83.3

Source: Government of India – PM-KISAN Scheme Dashboard, Ministry of Agriculture & Farmers Welfare, <https://pmkisan.gov.in> and Press Information Bureau – Unprecedented enhancement in budget allocation.

There is a high level of awareness about the PM-KISAN scheme in both states. However, Uttarakhand demonstrates a slightly higher registration rate compared to the other state. This could be attributed to its smaller population size and potentially more effective outreach efforts, especially in the hilly regions where targeted communication and accessibility may have been better managed.

Income Support Received (Last Fiscal Year)

State	Avg. Amount Received per Farmer (INR)	On-time Payment (%)	Payment Delays (%)
Uttar Pradesh	5,800	72	28
Uttarakhand	6,000	81	19

Source: Government of India – PM-KISAN Scheme Dashboard, Ministry of Agriculture & Farmers Welfare, <https://pmkisan.gov.in> and Press Information Bureau – Unprecedented enhancement in budget allocation.

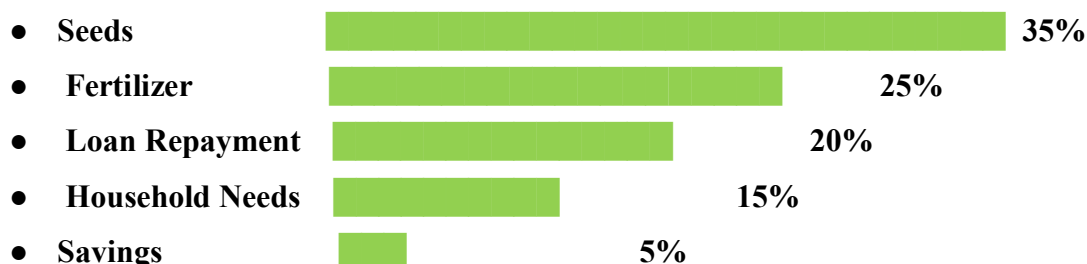
The majority of farmers received close to the full ₹6,000 annual amount under the PM-KISAN scheme, indicating effective implementation. Uttarakhand, in particular, recorded higher rates of timely disbursement. This efficiency may be due to fewer logistical challenges compared to larger states like Uttar Pradesh, allowing for smoother fund transfer and beneficiary management.

Usage of PM-KISAN Funds by Beneficiaries

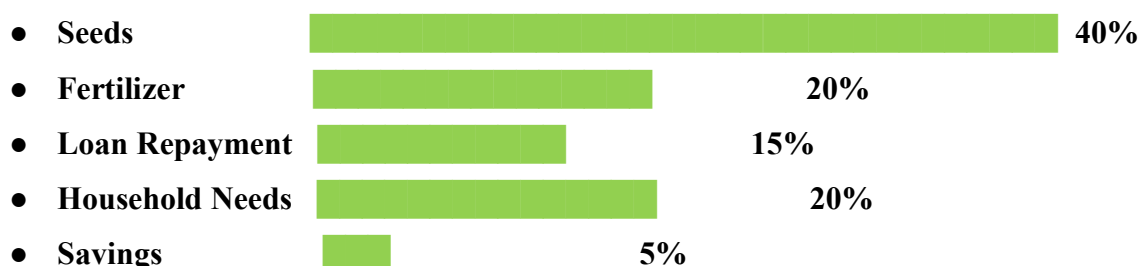
Purpose	UP (%)	UK (%)
Purchase of seeds	35	40
Fertilizer/Agri inputs	25	20
Loan repayment	20	15
Household needs	15	20
Savings	5	5

Source: Government of India – PM-KISAN Scheme Dashboard, Ministry of Agriculture & Farmers Welfare, <https://pmkisan.gov.in>

Usage of PM-KISAN Funds by Beneficiaries in Uttar Pradesh



Usage of PM-KISAN Funds by Beneficiaries in Uttarakhand



Source: Government of India – PM-KISAN Scheme Dashboard, Ministry of Agriculture & Farmers Welfare, <https://pmkisan.gov.in>

Interpretation

The majority of the funds disbursed under the PM-KISAN scheme are being utilized for purchasing agricultural inputs, which suggests that the scheme is effectively reaching its intended purpose of supporting farmers' productivity. Additionally, a significant portion of the funds is being used for loan repayment and household expenses, highlighting the indirect financial relief the scheme provides to farming households by easing their overall economic burden.

Impact

PM-Kisan Samman Nidhi serves as a natural experiment for evaluating the effects of Direct Cash Transfers. For such interventions to generate lasting benefits, they must lead to investments in productive endeavours. In theory, cash transfers can motivate farmers to invest in such activities for several reasons.

Addressing Constraints of Credit and Liquidity

Cash transfers can ease farmer's credit and liquidity challenges, enabling them to buy

necessary agricultural inputs. This is especially significant in India, where more than half of the farming population depends on informal credit sources, and around 20% procure inputs on credit.

Enhancing Net Income and Willingness to Take Risks

By increasing their net income, cash transfers may empower farmers to take more risks, potentially leading to more productive, higher-return investments.

Challenges

The PM-KISAN scheme, while impactful, faces several challenges in Uttar Pradesh and Uttarakhand. Key issues include the exclusion of genuine beneficiaries due to outdated or incomplete land records, and the inclusion of ineligible farmers, leading to inefficiencies. Many small and marginal farmers lack awareness or face difficulties in registration due to digital barriers. Delays in fund disbursement and limited integration with other support schemes also reduce the scheme's overall effectiveness. Additionally, there is little monitoring of how the funds are utilized, making it harder to assess their long-term impact on agricultural productivity and rural livelihoods.

Way Forward

Despite significant funding, PM-KISAN faces implementation challenges. Frequent verification changes, poor internet access, and limited digital literacy hinder farmers, especially in remote areas. Mandatory e-KYC, Aadhaar authentication, and the Aadhaar-Based Payment System (ABPS) have caused payment delays and confusion. Transparency measures are inconsistently applied, and poor communication on payment failures erodes trust. Bridging the digital divide, simplifying processes, and improving support systems are crucial to ensure effective delivery and restore farmers' confidence in the scheme.

Suggestions

To enhance the effectiveness of the PM-KISAN scheme, beneficiary identification must be improved through digitized, Aadhaar-linked land records to prevent inclusion errors. Timely and transparent payments should be ensured via automated systems and real-time grievance redressal. Awareness campaigns, especially in remote areas, can boost enrollment among eligible farmers. Linking PM-KISAN with complementary schemes like crop insurance and solar irrigation can increase its impact. Promoting the productive use of funds and conducting

regular impact assessments will help tailor the scheme to regional needs, ensuring that income support translates into real agricultural and livelihood improvements for small and marginal farmers.

Conclusion

The evaluation of the PM-KISAN scheme in Uttar Pradesh and Uttarakhand reveals that it has played a significant role in providing direct income support to small and marginal farmers, especially in terms of easing short-term financial burdens. The timely transfer of funds through Direct Benefit Transfer (DBT) has improved access to essential agricultural inputs and reduced reliance on informal credit. However, challenges such as the inclusion of ineligible beneficiaries, exclusion of genuine farmers, and lack of awareness persist. To enhance its impact, greater focus is needed on targeting accuracy, financial literacy, and integration with complementary schemes. Regular monitoring and region-specific adaptations can further improve effectiveness. Overall, PM-KISAN has demonstrated potential as a transformative initiative, but sustained efforts are required to ensure that the benefits reach the most vulnerable farmers and contribute meaningfully to long-term agricultural sustainability and rural development.

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